181 D

VOLUME X
No. 9.

GOVERNMENT OF NORTHERN IRELAND
MINISTRY OF AGRICULTURE

MONTHLY REPORT

JANUARY, 1936

IMPERIAL MYCOLOGICAL INSTITUTE
20 JAN. 1936

PRINTED UNDER THE AUTHORITY OF HIS MAJESTY'S STATIONERY OFFICE
BY R. H. RITCHIE, ENNISKILLEN

Readers are requested to note that any correspondence on the subject of this report should be addressed to the Secretary, Ministry of Agriculture, Stormont, Belfast, and marked "Monthly Report" in the top left-hand corner of the envelope. The postage on such letters need not be prepaid.

CONTENTS.

	PAGE
Agricultural Conditions at 1st January, 1936	1
The Markets during December, 1935	5
Agriculture in 1935	6
Pigs and Pig Prices	11
Eggs and Poultry	15
Returns of the Extent and Produce of Certain Crops in Northern Ireland, 1935	17
Pigs Marketing Board :—	
Election of Members for the counties of Fermanagh, Londonderry and Tyrone	19
Agricultural Marketing (Pig Industry) Act (N.I.), 1934 :—	
Pig Prices for January	19
Alteration in Pigs Marketing Board Levies	21
Cost of Standard Pig Ration	21
The Cattle Industry (Emergency Provisions) Act, 1934 and 1935	22
Wheat Act, 1932	23
Seasonal Farm Notes	24
Disinfection of Hatching and Rearing Appliances	29
Winter Rations for Livestock	31
Barley Variety Experiments	32
How Farmers can take advantage of the Fertilisers and Feeding Stuffs Act	34
Announcements and Reminders	35
Horse Breeding	36
Forestry	37
Lectures and Classes	38
Training of Girls in Poultry Keeping, Dairying, etc.	39
Fourteenth Egg Laying Test at Stormont	40
Answers to Correspondents	42
Prices of Feeding Stuffs	44
„ „ Fertilisers	46
Shipments of Live Stock from Northern Ireland Ports	48
Imports and Exports	49
Prices of Fat Stock at Belfast Auction Marts during December, 1935	49
Prices of Live Stock at Fairs during December, 1935	50
Trade in Live Stock at Fairs during December, 1935	51

VOLUME X, No. 9.

MINISTRY OF AGRICULTURE, NORTHERN IRELAND.

MONTHLY REPORT, JANUARY, 1936.

AGRICULTURAL NOTES.

That never-failing subject for conversation, the weather, is certainly giving farmers plenty to talk about at present. For the past four months it has been most unfavourable for agricultural pursuits, and its prolongation into January tends to dampen the outlook for 1936. In other respects, however, the prospect for the year that has just begun is reasonably bright. It is gratifying to record that potatoes have been selling well during the past month, and that prices are now much higher than they have been since the 1931/1932 season. The agricultural marketing schemes for the pig and dairy industries have proved efficacious during the past year, and should improve the lot of agriculture even further during 1936. While the position of the cattle industry is generally less satisfactory, there has been a slight improvement in prices of late, and it is hoped that they will continue to move upward this year.

In addition to the article on page 6, reviewing the position of the industry in 1935, there is a special informative article on page 11, entitled " Pigs and Pig Prices," which has been written with the view of assisting producers in directing their efforts into the most remunerative channels.

The attention of pig producers is also directed to the notice of an election of members to the Pigs Marketing Board, on page 19, whilst Farm Notes, on page 24, and Announcements and Reminders, on page 35, should be referred to for current general information.

AGRICULTURAL CONDITIONS AT THE 1ST JANUARY, 1936.

The month of December opened with a short spell of wet and cold weather. Then followed a period of drier but still colder weather, during which severe frosts occurred. A few showers of hail, sleet and snow also were experienced during this period, which lasted from two to three weeks. Milder conditions prevailed from Christmas to the end of the month, when heavy rain and fogs were frequent.

With the continuance of damp ground conditions, ploughing was held up further, and this work is now very much in arrear. The condition of pastures depreciated with the rains and severe frosts,

and there was comparatively little "keep" for out-lying stock. Fortunately, however, home-grown food stuffs are plentiful, and concentrates are still obtainable at reasonable rates.

Notwithstanding the adverse weather conditions, the condition of live stock generally is satisfactory. Out-lying cattle and sheep suffered considerably from the effects of the damp weather, but with the hand-feeding of hay, swedes and concentrates being practised on an increased scale, out-lying stock were maintained in fairly good condition and health.

The Crops.

Wheat.—The sowing of winter wheat is still held up in most areas by adverse ground conditions. Returns for the 1935 crop are published on page 17, and the increased area shows the extent to which farmers have been attracted by the provisions of the Wheat Act, 1932.

Small supplies of last year's crop were sold to authorised merchants during December at firmer prices which ranged from 5/- to 6/6 per cwt.

Oats.—The threshing of this crop has been considerably slowed up by inclement weather. It will be observed from the returns of the 1935 crop, published on page 17, that the acreage, estimated total production, and average yield were smaller than in 1934. The average yield for last year's crop was, however, higher than that recorded for the ten-year period 1925 to 1934.

Supplies of white oats marketed during December were much smaller than for November, and weekly average prices were steady at 5/3 per cwt. The range of prices at markets was from 4/8 to 6/- per cwt.

Barley.—It will be observed from the returns of this crop, shown on page 17, that the production of barley was appreciably higher in 1935 than in previous years. The average yield, although slightly below that of 1934, is higher than that recorded for the ten-year period 1925 to 1934. The bulk of the crop has been threshed for home requirements, which have increased as the result of the operations of the Pigs Marketing Scheme.

Small lots offered at markets during December were selling at around 6/6 per cwt.

Flax.—Scutching operations continued during the month, and satisfactory results were obtained both as regards yield and quality of fibre.

Decreased supplies of flax at markets last month were selling at slightly easier prices, averaging 9/1 per stone, as compared with 9/4½ per stone in November.

POTATOES.—It will be noticed in the account of the extent and produce of the potato crop in 1935, published on page 18, that the average yield was slightly higher than in 1934, but on account of the reduction in the acreage the total production of potatoes showed a decrease of 36,229 tons on the year, or slightly less than 4 per cent. The crop is keeping remarkably well in pits and in houses, and although some anxiety exists in regard to potatoes pitted in low-lying land, the reports suggest that, comparatively speaking, damage caused by flooding is negligible.

Rather smaller supplies of the main crop varieties were marketed for local consumption during December, and the upward trend in prices, noticeable at the end of November, continued during the month, although at the close they had a tendency to weaken. The following were the prices during the past six weeks :—

Week ended	Main Crop, all Classes.	Arran Victory.	Kerr's Pink.
	s. d.	s. d.	s. d.
7th December, 1935 ..	3 0	3 1½	2 8
14th ,, ...	3 6½	3 7½	3 8
21st ,, ...	3 9	3 11	3 9
28th ,, ...	4 2	3 11	4 4
4th January, 1936 ..	4 0	4 0	4 0
11th ,, ...	4 0	4 2	4 1¾

Shipments of potatoes from Northern Ireland ports to Great Britain continued on a much larger scale during December than a year ago, as the following figures illustrate :—

Week ended	1935. Tons.	1934. Tons.
14th December, 1935	6,134	1,852
21st ,, ,, ...	7,552	2,234
28th ,, ,, ...	5,270	1,333
4th January, 1936	6,470	2,551
11th ,, ,, ...	5,255	3,349

The prices paid by shipping merchants to growers improved further during December, a sharp rise taking place during the week ended the 14th December. Following Christmas week, prices were a little easier, but recovered again during the second week of January.

The prices per ton paid by export merchants during the week, ended 11th January, 1936, ranged as follows :—

	Bagged.		Loose.	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Up-to-Date (Red Soil)	4 5 0	to 4 10 0	4 0 0	to 4 5 0
Up-to-Date (Grey Soil)	3 10 0	to 4 10 0	3 10 0	to 4 0 0
Arran Consul	4 5 0	to 4 10 0	3 15 0	to 4 0 0
Arran Victory ..	3 10 0	to 4 7 6	3 10 0	to 4 0 0
Kerr's Pink	3 10 0	to 4 12 6	3 10 0	to 4 0 0

MANGELS.—The returns from this crop have, on the whole, been very satisfactory. The roots were lifted and safely stored before frost set in during the middle of December. It is also reported that, as a general rule, the roots are keeping well in storage.

TURNIPS.—A good yield is reported generally and the quality of the roots in most areas is satisfactory. In a few districts, however, "Raon," or Boron deficiency, disease is stated to be prevalent and may cause stocks to be considerably depleted.

HAY.—Particulars of the total acreage, average yield and total production of the hay crops in Northern Ireland in 1935 and 1934 are published on page 17. Large supplies of hay of good quality, available on most farms, are being extensively used for feeding to stock.

Smaller quantities of hay were returned from the principal market centres last month as compared with November returns. The decrease in supplies of first and second years' upland hay was fairly large, and average prices, continuing their steady upward movement, were dearer on the month at 56/- per ton, as against 52/9 per ton in November. Similarly, meadow hay improved in value, and was 2/- per ton dearer on the month at an average price of 42/- per ton.

GRASS SEEDS.—At the closing markets for grass seeds held last month there were rapidly diminishing supplies on offer, and prices were generally firmer on the month at 11/9 per cwt. for Italian, 13/9 per cwt. for perennial, and 9/2 per cwt. for mixed.

LIVE STOCK.

CATTLE.—The rough and cold weather has been severe on out-lying cattle, but since stall-feeding has been practised on a larger scale than usual, the herds are generally in a very fair condition. Dairy cattle have been maintained in fairly good condition, and there have been no abnormal outbreaks of ill-health.

Supplies of cattle at fairs during December were smaller than a month ago, and the reduction in numbers may partly be accounted for by the slippery condition of the roads. With an improved demand for beef, strong forward stores made firmer rates. Dairy cattle, the quality of which was generally below the average, were a quieter trade. Choice springing cows and heifers, however, sold readily at recent high prices.

SHEEP.—The flocks are generally in a reasonably good condition. Those on sodden pastures have deteriorated in condition, but farmers in most areas have made up for the lack of "keep" by hand-feeding. Small supplies at fairs were meeting with a steady trade at fairly high prices.

PIGS.—Young pigs were again offered in large numbers, and although trade was fairly steady throughout the month, prices were a shade below those ruling in November. Good quality brood sows were in demand at satisfactory prices, but, in general, the quality of sows offered at fairs was below standard and trade on the dull side.

HORSES.—The horse trade continued to operate on satisfactory lines, and recent high prices were fairly well maintained during the past month. Good heavy draught horses were making from £45 to £70 each, while second-class animals of this description were obtainable at from £35 to £45. First-class farm horses were quoted at from £30 to £50 each, while useful farm horses could be purchased at prices in the neighbourhood of from £20 to £35.

MILK.

Although the milk yield declined during the month, supplies available for creameries were at a high level for the season. The prices paid to farmers for milk delivered to the creameries ranged from 4½d. to 5½d. per gallon, the separated milk being returned to the farmers. The average price paid during the month of November for the milk produced in Northern Ireland and delivered to creameries for manufacturing purposes was 4.86d. per gallon, and the Ministry has made equalisation payments at 1.14d. per gallon in order to bring the average price in respect of this month to 6d. per gallon, as provided by the Milk and Milk Products Act (Northern Ireland), 1934. It should be noted that under the regulations creameries are required to distribute the equalisation payments in accordance with the butter-fat content of the milk received from each supplier. Farmers should, therefore, bear in mind that the actual payments made to them, being calculated on a butter-fat basis, may be at a rate per gallon which may vary below or above this average figure.

THE MARKETS DURING DECEMBER.

Supplies of the principal vegetables marketed during December were smaller than in the preceding month. There were smaller supplies of cabbage and cauliflowers marketed at Belfast, and while cabbages were 1d. cheaper at 1/5 per dozen, cauliflowers were unchanged in price at 2/6 per dozen. Savoys were ½d. dearer at 1/3 per dozen. Leeks were 1½d. dearer at 6d. per bunch, parsley 2¼d. dearer at 7½d. per bunch, carrots 1/4 dearer at 10/1 per cwt., and parsnips were a shade firmer in price at 5/4 per cwt. Garden turnips were 1d. cheaper at 1/6 per cwt.

Farmers' butter was less plentiful, and ¼d. dearer at 1/3¼ per lb. for print and 1/1½ per lb. for lump butter. Smaller supplies of eggs were marketed during the month. Hen eggs were 1¼d. cheaper on the month at 1/0½ per lb., while duck eggs increased in price from

13/6¼ to 14/2¼ per 120. There was a seasonal increase in the number of poultry marketed during the month, and prices were firmer. Hens were 2¼d. dearer at 1/9¼ each, chickens 7¼d. dearer at 2/6¼ each, and ducks 6¼d. dearer at 2/4 each.

Greatly reduced supplies of wool were marketed at unchanged prices of 5d. per lb. for long unwashed wool and 4½d. per lb. for mountain unwashed wool.

The seasonal trade for turkeys and geese was very satisfactory this year, and prices for turkeys were appreciably higher. Prices for geese, however, showed little change since last season.

The following are the range of prices of turkeys and geese at markets during the month, with comparative figures for the corresponding period of 1934 :—

TURKEYS.

	1935.	1934.
7th December ..	11d. to 1/1 per lb. (live weight)	7d. to 8d. per lb. (live weight)
14th ,, ..	11d. to 1/4 per lb. (live weight)	6d. to 8d. per lb. (live weight)
21st ,, ..	1/- to 1/5 per lb. (live weight)	7d. to 1/- per lb. (live weight)
28th ,, ..	1/- to 1/3 per lb. (live weight)	10d. to 1/- per lb. (live weight)

GEESE.

7th December ..	4d. to 4½d. per lb. (live weight)	—
14th ,, ..	4d. to 7d. per lb. (live weight)	4d. to 6d. per lb. (live weight)
21st ,, ..	4½d. to 7d. per lb. (live weight)	4d. to 7d. per lb. (live weight)
28th ,, ..	5d. to 8d. per lb. (live weight)	4d. to 5d. per lb. (live weight)

THE COST OF LIVING INDEX FIGURE.

The cost of living index figure at 1st December, 1935, was 47, or the same as that for the previous month. The figure at 1st December, 1934, was 44.

AGRICULTURE IN 1935.

Another year has passed in the world agricultural depression, and it would be over-sanguine to claim that the forces which in previous depressions of such severity have stayed and reversed the downward price movement have shown any signs of coming into play in 1935.

The world supply of many products, such as wheat, is still in excess of effective demand, and the one cause for optimism is the undoubted recovery which is taking place in industry throughout the world, and particularly in the United States. With the consequent increase in industrial purchasing power, there is some hope that the demand for agricultural products will expand in 1936.

Coming to agriculture in the United Kingdom, and in Northern Ireland particularly, the prospect is very much more cheerful. It is generally admitted that the chief hope of real recovery in agriculture lies in the deliberate planning of production, and since the Imperial Government abandoned the policy of free trade and began to put its own agricultural house in order, it has been possible for the Government of Northern Ireland to reorganise those branches of agriculture which are now comparatively insulated from the forces of world depression.

To begin, however, with production, except for severe frosts in May, as a result of which the apple crop has been rather below the average, weather conditions in the early part of the year were favourable, but heavy rains in the autumn delayed harvesting operations, and yields, on the whole, were not as high as in 1934.

The yield of wheat has declined from 22.4 cwts. per acre to 21.4 ; that of oats from 19.6 cwts. to 19.1 cwts., and barley from 20.8 cwts. to 20.4 cwts. The potato yield has gone up from 6.7 tons to 6.9 tons per acre, and it is estimated that the flax yield will be higher than in 1934. While the acreage under crops, as indicated by the census returns of 1st June, has generally declined, the area under wheat, barley and flax has increased—wheat from 8,676 acres in 1934 to 9,067 acres in 1935 ; barley from 2,434 acres in 1934 to 3,106 acres in 1935, and flax from 15,676 acres in 1934 to 27,755 acres in 1935, which, incidentally, is the largest acreage recorded since 1930, when it was 28,507. The increased production of wheat and barley reflect, the one directly and the other indirectly, the effect of Government policy. The wheat subsidy has directly stimulated the wheat production, which has increased by 5,807 acres since 1932, and the increased barley acreage is due partly to the increased demand for feeding stuffs for pigs, arising from the increase in the pig population, stimulated by the pig scheme.

The cattle population has increased from 768,536 in 1934 to 799,251, the sheep population from 761,310 in 1934 to 818,304, the highest number ever recorded in Northern Ireland. The poultry population has declined from 10,291,910 in 1934 to 10,084,670.

Exports of most products have increased since 1934.

Shipments of cattle from Northern Ireland ports have gone up from 262,558 to 322,339, and shipments of sheep from 134,283 to 165,505.

In the 10 months ended the 31st October, exports of potatoes have increased from 103,125 tons to 109,768 ; exports of bacon from 153,188 cwts. to 188,617 ; hams from 94,841 to 105,615 cwts. ; eggs from 2,961,662 gt. hds. to 3,010,038. The export of apples has increased from 26,379 cwts. to 100,280 cwts. This last figure is particularly remarkable, since, in 1924, the export of apples was only 6,007 cwts. for the whole year.

The most that can be said of the general price level is that it is no worse than last year. In some branches of the industry it is considerably better, but these are the sections which the Government has attempted to reorganise, and will be dealt with later.

Crop prices have changed very little since 1934. In the first nine months of the year, white oats were selling at firmer rates, and, with the arrival of supplies of this year's crop on the market, prices opened satisfactorily at 6/- per cwt. and then dropped sharply to a level of around 5/- per cwt.

During the greater part of 1935, hay prices have been a few pence per cwt. higher than the prices for 1934. During the third quarter the price of clover hay stood at 2/7, as compared with 2/5 in 1934, and the price of meadow hay was 2/0¾, as compared with 1/8 in the corresponding quarter of the previous year. Grass seeds, however, have sold at lower levels than for the past two years. The price of perennial fell from 19/- per cwt. in 1934 to 13/6 in 1935, the price of Italian from 22/- in 1934 to 11/- in 1935, and the price of mixed was 9/- this year, as compared with 18/- in 1934. The remainder of the 1934 flax crop sold during the first quarter of 1935 at the satisfactory level of, roughly, 10/10 per stone, and the prices for the 1935 crop have generally been on the same level as those recorded at the opening markets for the 1934 crop. The price of hen eggs has shown a slight improvement in 1935. In the second quarter, eggs were selling at 5¼d. per lb., as compared with 5d. per lb. in 1934, and in the third quarter at 8d per lb., as compared with 7½d. in 1934. At the present time the crop with the most promising outlook is potatoes. An improvement in the trade for the 1934 crop was caused in May by an unexpected demand for potatoes at cross-Channel centres. Early varieties of the 1935 crop were selling at as high as 10/- per cwt., but with the arrival of larger supplies on the market, prices fell rapidly to below the previous year's quotations. Opening at about 3/10 per cwt., at, roughly, the 1934 level, main crop supplies were sold up to November at slightly below 1934 prices, but owing to the very much reduced yield of the Great Britain crops an increased demand for Northern Ireland potatoes in Great Britain has driven up the prices of potatoes, and December quotations are very much higher than those of December, 1934. The average price for Arran Victory in December was 3/7 per cwt., as compared with 2/6 in 1934, and the average price of all classes of all the Main Crop varieties was 3/6 as compared with 2/4½ in 1934.

The general level of live stock prices has not risen in 1935. There has been an improvement in the sheep trade, and breeding stock and breeding ewes have been selling throughout the season at higher prices, but cattle prices have fallen still further. For one reason and another it has not been possible up to the present time to reorganise the cattle industry, but the temporary measures taken under the Cattle Industry (Emergency Provisions) Act have undoubtedly protected fat cattle producers at a most critical period. The payment of 5/- per live cwt. of cattle sold for production of beef has kept the return to the fat cattle producer above the price which he received in 1933, prior to the Act. Altogether, Northern Ireland producers have so far received £310,722 in respect of the beef subsidy since it came into operation in August, 1934.

Milk production, the other branch of the cattle industry, has been reorganised by the Government of Northern Ireland, and the Milk and Milk Products Act, upon which the Milk Scheme is based, has had its first complete calendar year of operation in 1935. Attempting, as it has, to secure a remunerative return to the milk producer and to clean up the milk supply with a view to increasing the consumption of milk, the Milk and Milk Products Act has had many difficult problems to face. One of the main problems was to secure that the prices that were fixed for milk sold for liquid consumption should be maintained, and that milk surplus to liquid requirements should be disposed of in such a way that it would not depress the price of liquid milk. Because only milk of certain quality can be sold for liquid consumption at the prices fixed by the Joint Milk Council, the bulk of the milk produced in Northern Ireland is kept out of the liquid milk market and must either be consumed on the farm or fed to live stock, or, on the other hand, be sold to creameries at prices which, under the prevailing system of equalisation payments, are considerably higher than creamery prices in 1933. Both liquid milk and creamery producers have benefited under the Milk and Milk Products Act, and in such a way that the one no longer under-cuts the other. In 1935 prices fixed by the Council have been well observed. The amount of milk sent to creameries has increased by 30 per cent., which is sufficient proof of the increased profitability of the production of milk for manufacture; and that the consumer has benefited in getting better quality milk is shown by the increasing cleanliness and freedom from bacteria of the samples of milk which the Ministry has examined. Milk of Grade C is, as a whole, produced in better condition generally than ordinary milk prior to the Act, and is this winter delivered to the customer at the price of 5d. per quart, and sold at 4d. if fetched from the shop, which is no higher than the lowest price for ordinary milk in 1933.

The Ministry has shown its determination to improve up the milk supply also by instituting the experiment in Spahlinger vaccine

which has recently been concluded. The success of this experiment suggests that a way may have been found to eradicate bovine tuberculosis from herds. If this should come about, the grounds of opposition among the medical profession to the cultivation of the milk-drinking habit will be removed, an end which is much to be desired at a time when agricultural depression is largely due to the under consumption of agricultural produce.

It is fitting to conclude an article on agriculture in 1935 with a brief account of the pig industry, of which no mention has been made so far. As a result of the quantitative regulation of imports of bacon into the United Kingdom since 1932, and the reorganising of pig marketing in Northern Ireland, under the Pigs Scheme, the population has risen rapidly during the past three years. June, 1935, saw an increase in the population, which then stood at a figure of 457,878, of 20.4 per cent., and it appeared from the sample inquiry of October that there had been a further increase in the population to a figure of 512,000. The increase in the sow population from 39,837 in 1934 to 47,436 in June, 1935, indicates that in 1936 the production of pigs for bacon will be in the neighbourhood of 700,000, as compared with 590,000 in 1935. For two years the price of pork has remained fairly stable at a level of at least 5/- per cwt. higher than it was in 1932. In order to co-ordinate the interested sections with a view to the planning of the pig industry in Northern Ireland on the most economic and efficient lines, the Pig Industry Council was set up under the Agricultural Marketing (Pig Industry) Act, 1934, and held its first meeting in March. It has 3 representatives of producers, 3 of bacon curers, and 3 members nominated by the Minister of Agriculture, and advises the Ministry in matters concerning the industry as a whole. During 1935 it has determined the basis of fixing pig prices, it has assisted the Ministry of Agriculture in controlling the expansion of the bacon industry by advising it as to the granting of licences to new bacon factories, and has instituted an experiment with the object of securing that the measurements adopted under the various grades correspond with requisite differences in the quality of the hams. The value of bodies, such as the Pig Industry Council, cannot be measured in terms of pounds, shillings and pence, but, apart altogether from the very considerable regulatory and advisory work which it carries out, in which the practical experience of the members is invaluable to the Ministry, the Council creates a co-operative spirit in the pig and bacon industries, which promises well for the future.

So, too, will the importance of the two new Wiltshire bacon factories which have been set up in Northern Ireland in 1935. With the live pig trade on the increase owing to the relatively restricted market for the roll bacon and hams generally produced in Northern Ireland, and the consequent inability of Northern Ireland bacon curers to absorb all the pigs produced in this country, the establishment of these new

factories for the curing of the kind of bacon for which there is a very great demand since the restriction of foreign imports into the United Kingdom will be of benefit to Northern Ireland agriculture and to the country as a whole.

1935 has been a year in which the foundations of prosperity have been well laid. If world recovery is slow, this country is at least putting its own affairs in order, and, if agricultural prosperity returns with industrial recovery, Northern Ireland will be all the more fitted to take advantage of it.

PIGS AND PIG PRICES.
(Contributed).

A new era in pig production in the United Kingdom followed the adoption by the Imperial Parliament in 1933 of the policy of quantitative regulation of supplies of foreign bacon for the British market in order to provide a guaranteed market for the home product. Northern Ireland pig producers, aided by the machinery set up under the authority of Parliament, have co-operated whole-heartedly in catering for the increased demand which they knew would take place for their pigs and have doubled their output of bacon pigs. It was recognised in the report of the Commission on Pigs and Pig Products, upon which the Schemes were originally framed, that from the producers' point of view it was most important not only to provide them with an assured market but to enable them to realise a fair price for their product, taking into account the costs of production. It was soon found in practice, however, that not only must the cost of production be taken into account in fixing pig prices, but due allowance must be made for demand as measured in the price that could be obtained for the finished product—bacon. We thus find that the Pigs Marketing Board (Northern Ireland), which was the body empowered at that time to fix pig prices, agreed with the Bacon Marketing Board (Northern Ireland) that as from July, 1934, pig prices would be fixed month by month by means of a formula which took into account the farmer's cost of production on the one hand and, on the other hand, the price which the consuming public were prepared to pay for the finished product as ascertained by a study of the realised prices of bacon, hams and fresh meats.

This formula in principle has been in operation since that date, and was considered by the Pig Industry Council for Northern Ireland with regard to price fixing for the year 1936. The Council is the statutory body (containing three representatives of pig producers, three representatives of bacon curers and three independent members) set up under the Agricultural Marketing (Pig Industry) Act (Northern Ireland), 1934, and charged under the Act with the duty of determining pig prices. The Council agreed that the fixation of pig prices by reference to realised prices of bacon as well as by reference to the cost

of pig production, was sound in principle and have continued the formula on the same lines in 1936 as in 1935. They decided, however, that the details of the price fixing arrangements outlined in the formula should receive close examination during the year in order that any desirable amendments should be embodied in their determination for 1937. Accordingly, investigations on such matters as costs of bacon curing and costs of pig production are in train so that the results may be available to guide the Council when the time comes to decide upon the terms of their determination for 1937.

The determination of the Council as regards prices and terms of sale during 1936 has been printed and a copy will be sent post free on application. The main price provisions are, however, as follows. Pig prices are ascertained by reference to the prices of roll bacon and hams, fresh meats and selected feeding stuffs. Prices of dried bacon and hams and fresh meats are ascertained for a four or five weekly period by an independent accountant appointed by the Council who calculates the weighted average prices obtained by five selected bacon curers. Variations in the cost of production of bacon pigs are calculated on the basis of the average retail cost, over a period of sixteen weeks, of a standard ration of feeding stuffs. This latter figure is supplied by the Ministry of Agriculture. The periods mentioned above end on the Saturday nearest the twenty-first day of each month, and the results of these calculations are reflected in the prices which apply during the following month. When calculations, according to the formula, are completed the result is a figure called the standard price. This price includes a bonus of 4/– for the months January to April, 2/– for the months May to August, and 1/– for the months September to December. Producers are thus offered a price incentive to encourage spring deliveries and so help to even out the very marked seasonality in pig production.

The standard price applies to dead pigs weighing c.1.1.14 to c.1.3.14 sold to roll and ham curers and graded B, i.e., the average pig for this market, as Grade B is the medium grade and the mean of this weight range c.1.2.14 corresponds closely with the average weight of all such pigs. Table A, which is set out below, shows the different prices which revolve round the standard price in these cases.

The Council, however, had also to consider the question of sales by producers to Wiltshire bacon curers. It was agreed that if a producer contracted to deliver monthly, over a period of at least three months, specified numbers of live pigs of a weight range of c.1.0.14 to c.1.2.7 dead weight, he was entitled to receive for suitable pigs of this range something more than the above-mentioned standard price. Accordingly a premium of at least 5/– per cwt. over the standard price will be paid for Grade 2 pigs of this weight range during 1936. This premium is to cover the services performed by a producer who adheres to an agreement for future deliveries of pigs and who delivers an article which, weight for weight, is more costly to produce than the average roll and ham pig.

In the case of pigs sold to the Pigs Marketing Board the price received by the producer will depend upon whether or not his pigs are suitable for re-sale to Wiltshire curers. If a producer sells suitable Wiltshire pigs to the Board he may receive a price equivalent to 5/– per cwt. over the standard price for pigs sold dead to roll and ham curers. Under no circumstances, however, will producers who sell pigs to the Pigs Marketing Board obtain a better price than producers who sell on direct contract to Wiltshire curers, and the price paid by the Board may at certain times throughout the year be substantially lower than the direct contract price. It will be recalled that during the Autumn of 1935 producers who sold on direct contract to Wiltshire curers obtained a lower price for their pigs than was the case with producers who had refrained from contracting and who sold to the Board. The Council have, however, secured that this will not happen again during 1936, and that it will never be less profitable for a producer to sell on direct contract than to the Board. Producers who are able to enter into a direct contract with a Wiltshire curer may therefore, proceed to do so confident that the sale of their pigs in this way will, during 1936, give them a better return than any other method of sale.

In the case of pigs sold to the Pigs Marketing Board, which are not suitable for the Wiltshire trade, the live weight price paid will be broadly comparable to the corresponding dead pig price as set out in Table A below. The Board's price for live pigs may be as much as 5/– per cwt. less than the appropriate parity price.

The following tables illustrate clearly how the price per cwt. of a pig carcase depends upon, first, the weight class into which it falls, and secondly, the quality grade which it obtains when graded by an authorised officer of the Ministry of Agriculture.

TABLE A.

Prices per dead cwt. for dead pigs sold to roll and ham curers.

Weight Class.	Grade A.	Grade B.	Grade C.	U.L. or U.F.	Partly Black Carcases.
I. 1c. 1q. 14lb. to 1c. 2q. 14lb.	Plus 3/–	Standard Price	Cut 3/–	Cut 6/–	Cut 5/– on relevant grade price.
II. 1c. 2q. 15lb. to 1c. 3q. 14lb.	Plus 3/–	Standard Price	Cut 3/–	Cut 6/–	
III. 1c. 3q. 15lb. to 2c. 0q. 0lb.	Standard Price	Cut 3/–	Cut 6/–	Cut 9/–	
IV. 2c. 0q. 1lb. to 2c. 0q. 14lb.	Cut 6/–	Cut 9/–	Cut 12/–	Cut 15/–	

U.L.=Under Grade A. Measurements. U.F.=Over Grade C. measurements.

TABLE B.

Price per dead cwt. for live pigs sold to Wiltshire Bacon Curers on Direct Contracts Registered with the Council.

Weight Class.	Grade 1.	Grade 2.	Grade 3.
Under 1c. 0q. 14lb.	3/– below Standard Price	3/– below Standard Price.	3/– below Standard Price
1c. 0q. 14lb. to 1c. 2q. 7lb.	9/– above Standard Price	5/– above Standard Price	1/– above Standard Price
1c. 2q. 8lb. to 1c. 2q. 10lb.	6/– above Standard Price	2/– above Standard Price	2/– below Standard Price
1c. 2q. 11lb. to 1c. 2q. 14lb.	4/– above Standard Price	Standard Price	4/– below Standard Price
Over 1c. 2q. 14lb.	1/– above Standard Price	3/– below Standard Price	7/– below Standard Price

It is thus apparent that the highest prices per cwt. are to be obtained by the producer who can enter into a contract for the delivery of live pigs weighing from 1½ to 2 cwt. live weight, i.e., 1cwt. 0qr. 14lb. to 1cwt. 2qr. 7lb. dead weight.

The following deductions are at present made in the case of sales of pigs by producers to either bacon curers or the Board:—Contribution to cover administrative expenses of Pigs Marketing Board 1/– ; Levy to finance the trading operations of the Board 2/6. Where pigs are sold to curers a further deduction not exceeding 6d. per pig may be made to cover insurance, while in the case of pigs sold to the Board a marketing charge of 2/6 per pig is made.

Any reader desiring further information on this subject is invited to apply to the Joint Secretaries, Pig Industry Council for Northern Ireland, Stormont, Belfast.

EGGS AND POULTRY.

REPORT OF THE REORGANISATION COMMISSION FOR GREAT BRITAIN.

This Commission, which had been appointed jointly by the Minister of Agriculture and Fisheries and the Secretary of State for Scotland on the 25th January last year, made its report last month. Its terms of reference were to investigate and report upon the manner in which the operation of the schemes prepared by the Reorganisation Commission for England and Wales and for Scotland could best be facilitated by measures affecting imports of eggs and poultry and by co-operation between the Boards administering the schemes in England and Wales and Scotland and the Northern Ireland Authorities.

Briefly its main recommendations are as follows:

In regard to import duties it is recommended that existing duties on eggs in shell from foreign countries should be increased by 6d. per 120, and that a duty of 6d. per 120 should be imposed on all eggs in shell imported from Empire countries at present on the free list. No immediate recommendations are made for altering the duties on eggs not in shell, but it is suggested that if the market for home produced "seconds" should become seriously affected by the competition of imported egg products home eggs should receive the same measure of preference in the manufacturing market as is now proposed for them in the shell-egg market.

It is further proposed to adopt the levy-subsidy principle so that the possibility of exporting countries over-riding the duties would be lessened, and to form a fund to be used for the further development of the industry by ear-marking 25 per cent. of the total income from all duties on imports of eggs and egg products. It is estimated that approximately £340,000 will be available each year by this means. The administration of this fund should, it is suggested, be entrusted to a permanent Commission composed of three independent persons nominated jointly by the Ministers responsible for Agriculture in England and Wales, Scotland and Northern Ireland respectively. In respect of information concerning imports it is recommended that

legislation be enacted to require that any person importing eggs in shell into the United Kingdom should furnish to the Customs Authorities particulars relating to the consignments, and that such particulars should be furnished to the permanent Commission already referred to for dissemination to the Marketing Boards and the corresponding body in Northern Ireland.

The Commission recommend that the storing of eggs by the Marketing Boards in Great Britain and the appropriate authority in Northern Ireland should be safeguarded against a disproportionate increase of imports during the period of storage. Here, again, the permanent Commission would be the body responsible for the seasonal regulation of imports of eggs in shell, but in addition the Market Supply Committee should, it is proposed, continue to keep under review the market for eggs and poultry, and to make such recommendations to His Majesty's Government as may appear desirable from time to time.

The Commission consider that the existing duty of 3d. per lb. on imported table poultry, including turkeys, offers a sufficient margin of preference to the home industry, and they, therefore, recommend no increase in this duty.

They are of the opinion that there should be separate marketing schemes in England and Wales and in Scotland, but that close co-ordination between the Marketing Boards and Northern Ireland is essential. They propose that a Co-ordinating Committee should be set up, consisting of five representatives of the English Board, two of the Scottish Board and two from Northern Ireland, together with three members of the permanent Commission.

The report endorses previous recommendations regarding the marking of imported cold-stored eggs with an indication that they have been cold-stored, and expresses the view that improvements in marketing methods are likely to be more potent than measures of import control in stimulating the healthy development of the home industry, and that the recommendations as to import policy are intended to supplement and assist the reorganisation of home marketing, not to avoid the need for it.

This Report is published by His Majesty's Stationery Office, Price 1/– net.

RETURNS OF THE EXTENT AND PRODUCE OF CERTAIN CROPS IN NORTHERN IRELAND, 1935.

Hay.

The total yield of the Hay Crop in Northern Ireland in 1935 is estimated at 784,923 tons as follows :—First Year's Hay 200,882 tons, Second and Third Year's Hay 134,843 tons and Permanent Meadow 449,198 tons. The estimated average yield of the entire crop is 1.9 tons per statute acre, as compared with 1.8 tons in 1934, and is similar to that of 1933. The average yield for the five years 1930–1934 amounted to 1.8 tons per statute acre.

The following table shows the extent in statute acres, the estimated total produce and the average estimated yield per statute acre in each of the years 1935 and 1934.

	1st Year's			2nd and 3rd Year's		
	Total Acreage	Average Yield	Total Produce	Total Acreage	Average Yield	Total Produce
	Acres	tons	tons	acres	tons	tons
1935	123,221	1.6	200,882	83,907	1.6	134,843
1934	131,296	1.6	211,865	86,580	1.6	136,548

	Permanent Meadow			Total Hay		
	Total Acreage	Average Yield	Total Produce	Total Acreage	Average Yield	Total Produce
	acres	tons	tons	acres	tons	tons
1935	217,008	2.1	449,198	424,136	1.9	784,923
1934	225,358	2.0	457,053	443,234	1.8	805,466

Wheat, Oats and Barley.

The appended statement shows in tabulated form the estimated extent, total production, and average yield of the there principal grain crops in the year 1935, with comparative figures for the year 1934, and the average for the ten-year period 1925 to 1934. The acreage under wheat shows an increase of 391 acres, or 4.5 per cent., oats a decrease of 7,101 acres, or 2.5 per cent., and barley an increase

of 672 acres, or 27.6 per cent. The average yields of the three crops are lower than in 1934, wheat showing a decrease of 1.0 cwt., oats 0.5 cwt., and barley 0.4 cwt. per statute acre. It will be observed that the average estimated yield for each crop shows an increase as compared with the average for the decennial period.

	Wheat			Oats			Barley		
	Extent	Estimated total production	Average yield per statute acre	Extent	Estimated total production	Average yield per statute acre	Extent	Estimated total production	Average yield per statute acre
	acres	cwt.	cwt.	acres	cwt.	cwt.	acres	cwt.	cwt.
1935 ..	9,067	193,932	21.4	272,688	5,203,301	19.1	3,106	63,518	20.4
1934 ..	8,676	194,520	22.4	279,789	5,485,079	19.6	2,434	50,714	20.8
Average for period 1925 to 1934 ..	4,984	100,883	20.0	301,911	5,469,478	18.1	1,805	35,221	19.5

Potatoes.

The estimated average yield of the potato crop in Northern Ireland in 1935 is 6.9 tons per statute acre, as against 6.7 tons per statute acre in 1934, and is similar to that for the ten years 1925-1934.

The following table shows the estimated extent, total produce and average yield per statute acre of the crop in Northern Ireland in 1935, with comparative figures for the year 1934, and the decennial period 1925-1934.

The estimated produce and yield per acre shown in the table represents in all cases the yield of sound tubers only.

	Potatoes.		
	Total Acreage.	Total Produce.	Average yield per statute acre.
	Acres.	Tons.	Tons.
1935	129,015	886,679	6.9
1934	137,321	922,908	6.7
Average for the period 1925-1934	145,654	1,012,355	6.9

PIGS MARKETING BOARD.

Election of Members for the Counties of Fermanagh, Londonderry, and Tyrone.

An election of members to the Pigs Marketing Board for the Counties of Fermanagh, Londonderry, and Tyrone will be held in the month of February next in accordance with paragraph 6 of the Pigs Marketing Scheme (Northern Ireland), 1933. Candidates require to send their nominations to the Ministry by registered post so as to reach the Ministry not later than the 20th January, 1936. The nomination paper must be signed by a proposer, a seconder, and at least eight other persons as assenting to the nomination, each of whom must have been registered with the Pigs Marketing Board at the 1st November last, and must reside within the administrative county for which the candidate is nominated.

The election will be conducted by post, and voting papers will be issued to all producers whose names appeared on the Register at the 1st November last. The voting papers will be issued not later than the 14th February next, and in order to count in the election they must be returned to reach the Ministry not later than the 28th February, 1936.

Forms of nomination may be obtained from the Ministry of Agriculture, Stormont, Belfast, and copies of the Register of Producers entitled to vote in the election may be obtained from the Secretary, Pigs Marketing Board, 36 Victoria Square, Belfast, price 10/6 per Administrative County, or the Register may be inspected free of charge at the offices of the Board, at the headquarters of District Inspectors, Royal Ulster Constabulary, or at the offices of the Secretary, County Committee of Agriculture in each of the Counties for which an election is being held.

AGRICULTURAL MARKETING (PIG INDUSTRY) ACT, (NORTHERN IRELAND), 1934.

PIG PRICES FOR JANUARY, 1936.

The Pig Industry Council for Northern Ireland have announced the following prices for dead pigs for sale by producers to curers in Northern Ireland in January, 1936 :—

Price per Dead Cwt.

Weight Class.	Grade A.	Grade B.	Grade C.	U.L. or U.F.
I. c.1 1q. 14lb. to c.1 2q. 14lb. ..	60/10	57/10	54/10	51/10
II. c.1 2q. 15lb. to c.1 3q. 14lb. ..	60/10	57/10	54/10	51/10
III. c.1 3q. 15lb. to c.2 0q. 0lb. ..	57/10	54/10	51/10	48/10
IV. c.2 0q. 1lb. to c.2 0q. 14lb. ..	51/10	48/10	45/10	42/10

U.L.=Under Grade A measurements. U.F.=Over Grade C. measurements.

The price for partly black pigs between c.1.1.14 and c.2.0.14 will be 5/- per cwt. below the relevant grade price.

Authorised cuts :—

(a) Broken ham (dry, shank and/or shell bone break)—5% of the gross value of the carcase.

(b) Broken ham (wet break)—12½% of the gross value of the carcase.

(c) Shoulder-stuck carcase—3/- per shoulder affected.

The gross value of a carcase is the product of the dead weight and the relevant Grade or other price per cwt.

Where portion of a pig carcase weighing between c.1.1.14 and c.2.0.14 is condemned and the existence of disease could not reasonably have been known to the producer at the time of slaughter, the appropriate Grade price shall apply. If the carcase is wholly condemned on account of disease, the existence of which could not reasonably have been known to the producer at the time of slaughter, the relevant Grade B price shall apply.

The foregoing prices do not apply in the case of (a) wholly black pigs, boars, rigs or stags, sucked sows, and pig carcases weighing under c.1.1.14 or over c.2.0.14, and (b) pigs visibly diagnosable as diseased before slaughter and subsequently condemned ; emaciated or screw pigs ; smelling pig carcases with definite indications of putrefaction, and pig carcases badly abused or damaged before being handed over by the producer to the curer.

In the case of pigs sold alive under direct contract to Wiltshire curers, the prices per dead cwt. payable for graded pigs delivered in respect of the month of January will be as follows :—

Weight Class.	Grade 1.	Grade 2.	Grade 3.
Under c.1 0q. 14lb.	54/10	54/10	54/10
c.1 0q. 14lb. to c.1 2q. 7lb.	66/10	62/10	58/10
c.1 2q. 8lb. to c.1 2q. 10lb.	63/10	59/10	55/10
c.1 2q. 11lb. to c.1 2q. 14lb.	61/10	57/10	53/10
Over c.1 2q. 14lb.	58/10	54/10	50/10

The Pigs Marketing Board will buy live pigs on and from 1st January, 1936, until further notice at the following prices :—

Live Weight.	Price per live cwt. Grades			
c. qr. lb. — c. qr. lb.	I	II	III	Unsuitable.
1 . 2 . 0—1 . 3 . 14	51/–	48/6	46/–	39/6
1 . 3 . 15—2 . 0 . 0	47/–	44/6	—	39/6
2 . 0 . 1—2 . 1 . 14	44/6	42/–	—	39/6
2 . 1 . 15—2 . 2 . 7	42/–	39/6	—	36/6
2 . 2 . 8—2 . 2 . 21	38/6	36/–	—	32/6

These prices do not apply to live pigs outside the above weights, to live pigs intended for breeding, to live boars, live sucked sows, rigs or stags, injured or diseased pigs, live in-pig gilts.

Authorised Deductions.

Every pig (dead or alive) sold to a curer or to the Pigs Marketing Board is subject to a levy and contribution at present amounting to 3/6.

In addition to this amount, a deduction not exceeding 6d. per pig may be made in the case of sales to curers to cover insurance, so that the producer will not suffer financial loss if the carcase is condemned as unfit for human consumption.

In the case of pigs sold to the Board, there is a deduction of 2/6 per pig for marketing charges.

Alteration in Pigs Marketing Board Levies.

In pursuance of an Order made by the Ministry, the total sum for levy and contribution to be deducted in the case of each pig sold by producers to licensed bacon curers or to the Pigs Marketing Board was reduced from 5/- to 3/6 as from Monday, the 6th January. The administrative contribution of 1/- per pig remains unchanged, but the trading levy has been reduced from 4/- to 2/6 per pig.

Cost of Standard Pig Ration.

The average retail cash price per cwt. of the standard ration for the sixteen weeks period 2nd September to 21st December, 1935, as calculated by the Ministry, was 7/0¼. This price is used, together with the realised prices of bacon and hams and of fresh meats over a set period, to determine the standard price of pigs for January.

The following is the ration upon which the feeding cost is based :—

Barley Meal	30%
Maize Meal	40%
Pollards (White)	20%
Extracted Soya Bean Meal	5%
Meat and Bone Meal (60% Protein) ..	5%

Grading Statistics.

Table showing the percentages of pig carcases falling within the weight and grade classes indicated during November, 1935.

GRADE A.				GRADE B.				GRADE C.				TOTAL.
1	2	3	4	1	2	3	4	1	2	3	4	
16.8	16.6	3.2	.6	11.5	18.7	4.4	1.4	3.9	8.6	1.4	.3	87.4

UNGRADED CARCASES.						
Under Grade A. measurements. U.L.	Over Grade C. measurements. U.F.	Wholly condemned. U.	Wholly black injured or damaged. U.	Overweights underweights boars, sows. X.	Partly black. Y.	
.03	2.57	.06	1.92	7.96	.06	12.6
					TOTAL	100%

These figures have been calculated from the purchase and grading statements which the curers furnish to the Ministry. From these returns it has also been ascertained that, following the very large number of pigs sold on a dead weight basis in October, the volume of trade in November was considerably smaller and fell below the September level. The average weight of each carcase during the month in question was 1 cwt. 2 qrs. 19 lbs. or 2 lbs. heavier than the figure for the previous month, and the heaviest recorded since grading was introduced. The average price of pork during this month was 5d. cheaper on the month at 56/5 per cwt., and the average price obtained for each carcase, less levy and contribution charges, was £4 9s. 1d.

THE CATTLE INDUSTRY (EMERGENCY PROVISIONS) ACTS, 1934 AND 1935.

According to the latest returns received from the Cattle Committee, the total payments to Northern Ireland owners of certain classes of cattle up to and including 28th December, 1935, amounted to £310,722 6s. 3d., and were in respect of 147,220 head of cattle. This represents an average payment of £2 2s. 1d. for each head of cattle certified.

The statement in respect of payments made from the Cattle Fund to Northern Ireland owners during the week ended 28th December records that some 463 steers, 190 heifers and 5 cow-heifers, of a total weight of 5,794 cwts., realised a total value of £8,642 18s. The average weight of each animal sold on a live weight basis was 8cwt. 3qr. 6lb., and the average price amounted to £13 3s. per head, or 29/10 per cwt. The average subsidy obtained for each animal during that week was £2 4s. 0d.

WHEAT ACT, 1932.

SUBMISSION OF SCHEME FOR FORMATION OF THE FLOUR MILLERS' CORPORATION.

A draft of a Scheme under the Wheat Act, 1932, providing for the election of the members of the Flour Millers' Corporation by registered millers and making provision for the number of such members and as to the functions of the Corporation, has been duly submitted to the Minister of Agriculture and Fisheries and the Secretaries of State for Scotland and the Home Department.

Copies of the draft Scheme may be obtained on payment of 3d. per copy (post free) from the Preliminary Flour Millers' Corporation, 40 Trinity Square, London, E.C. 3.

Any objections and representations with respect to the draft Scheme should be made to the Minister of Agriculture and Fisheries, The Secretary of State for Scotland or the Secretary of State for the Home Department. They should be addressed to any of the following :—

The Secretary,
Ministry of Agriculture and Fisheries,
10 Whitehall Place,
London, S.W.1.

The Under-Secretary of State for Scotland,
Scottish Office,
Whitehall,
London, S.W.1.

The Secretary,
Department of Agriculture for Scotland,
York Buildings,
Queen Street,
Edinburgh.

The Under-Secretary of State,
Home Office,
Whitehall,
London, S.W.1.

The Secretary,
Ministry of Agriculture for Northern Ireland,
Stormont,
Belfast.

so as to reach them not later than the 8th February, 1936 ; objections and representations received after that date will not be considered.

SEASONAL FARM NOTES.

The Land.

Ploughing.—Ploughing should take precedence over all other farm work at this season so that it may be completed well in advance of sowing and planting time. Every opportunity should be taken, when soil conditions permit, to have the ploughing of stubble ground completed and the ploughing of leas should also be pushed forward with all haste. Early ploughing is a valuable aid in obtaining a good seed bed as winter frosts mellow the upturned soil and make it more easily worked later ; it also leads to a better distribution of labour and enables full advantage to be taken of suitable weather in Spring to get sowing and planting operations completed, without delay.

Land Improvement Works.—Labour not engaged at horse work can be usefully employed at this season at improvement operations, such as drainage, fencing, road-mending, etc. Land drainage work should be carried out before the rush of spring work begins. Attention should be given to fences in need of repair, to the cutting and trimming of hedges, to the clearing out of water courses into which field drains are running, and to other work of a similar nature.

Readers are reminded of the advice given in last month's report regarding the improvement of farm hedges. Frequently hedges are neglected and do not form efficient fences. Such hedges can be greatly improved if "laying," which consists of bending and wattling selected young shoots horizontally along the line of the hedge and subsequently trimming off any surplus material, is carried out.

Farmers are reminded that a scheme is in operation under which financial assistance for the carrying out of drainage and other land improvement works can be obtained. Full particulars of the scheme along with application forms can be obtained from the Ministry, on request.

Potatoes.—Potatoes stored in houses should be sorted, while those in pits should be lifted when opportunity permits. Seed of maincrop varieties should be boxed as soon as possible so that they may be properly sprouted before springtime. Where it is intended to obtain fresh supplies of seed, the necessity for placing orders early is again stressed. A good demand is being experienced for seed from certified crops, particularly crops grown from stock seed. As those crops were pure and had a high degree of freedom from diseases, seed from such sources is strongly recommended. Unless, however, orders are placed soon there is likely to be difficulty in obtaining supplies. In all cases fresh supplies of seed potatoes should be obtained only from crops which showed a high degree of freedom from diseases, such as leaf roll and mosaic. Lists giving the names and addresses of growers of such crops can be obtained from the Ministry on request.

Oats.—Supplies of seed oats should also be obtained or ordered in good time. Should there be any doubt regarding the most suitable variety to sow the Agricultural Instructor will advise on request. The produce of specially selected stocks of the most promising varieties of oats may be available in some districts and farmers who desire seed from these stocks should consult the Instructor in Agriculture as soon as possible.

Barley.—The results from the barley variety experiments carried out by the Agricultural Instructors are given on page 32 of this report. The results indicate that, under suitable conditions, satisfactory crops of barley can be grown in Northern Ireland, and, in view of the value of barley meal in pig feeding rations, farmers are recommended to grow a small area of this crop in the incoming season.

Pastures.—There is still time to apply phosphatic manures to pastures, but if results are to be obtained in this season's grazing the manure should be applied immediately. If the fields to be manured are covered with a mat of "fog" or old grass they should be well harrowed before manuring is carried out. An ordinary straight-tined, zig-zag harrow, the tines of which have been freshly sharpened, is suitable for this purpose. From 6 to 8 cwt. of high grade basic slag, Semsol or Gafsa rock phosphate per acre is a suitable dressing to apply. For the heavier classes of soils a potash manure in addition to the phosphate is recommended. About 1cwt. of 30 per cent. potash salts per acre will be adequate. This manure should be mixed with the phosphatic manure prior to application.

Live Stock.

Sheep.—Where early lambs are expected, the breeding flock of sheep should receive careful attention as regards feeding and management from now onwards. As a supplement to the grass, a small allowance of concentrates, such as a mixture of equal parts oats, decorticated earthnut cake and bran, along with a few turnips daily, will maintain the ewes in good condition for lambing. The feeding of excessive quantities of turnips to in-lamb ewes should, however, be avoided, as this practice tends to make lambing difficult. A fresh field of pasture should be left ungrazed from now on so that the lambs and ewes may have clean, fresh grass after lambing.

Cattle.—Cows which are coming on to calve should be kept in good condition by suitable feeding. It is a grave mistake to allow in-calf dry cows to lose condition, as this adversely affects the milk yield after calving. In addition to hay and roots, a supplementary ration of a balanced mixture of concentrates should be fed at the rate of about 3 lb. daily for at least one month prior to calving. Information

relating to the feeding of dairy cows, along with examples of suitable meal mixtures to use, are given in Leaflet No. 16. See also page 31 of this report for examples of rations.

Cattle in houses should be examined periodically for the presence of lice at this season. These pests cause irritation to the animals, and, if present, hinder good thriving. A simple and effective method of destroying lice on cattle is to wash the animals thoroughly with a 5 per cent. (1 part in 20 parts water) solution of Jeyes' fluid or of carbolic sheep dip. The polvo-soap wash used for the destruction of warbles in cattle is also a satisfactory dressing for lice. Particulars regarding the preparation of this wash are given in Leaflet No. 64. It may be necessary to dress affected animals a second time at an interval of from 10 to 14 days after the first application has been made.

Pigs.—The necessity for using satisfactory substitutes for separated milk in pig rations, where supplies of milk are not available, has been emphasised in these Notes from time to time. High grade meat and bone meal or soya bean meal and minerals have been found to be efficient milk substitutes when included in the ration at the rate of 10 per cent. It has been brought to the notice of the Ministry that some feeders are still using fish meal as a milk substitute in pig rations. On no account should this food be fed to fattening pigs, as it is very liable to give a "fishy" and very undesirable taint to the bacon produced. The use of fish meal in rations for fattening pigs does not give any superior results than those obtained from either high grade meat and bone meal or soya bean meal, and its use will undoubtedly reflect adversely on the quality and reputation of the bacon. Particulars of suitable meal mixtures to use along with milk and with milk substitutes for fattening pigs are given in Leaflet No. 35 and on page 31 of this report.

Purchase of Foods.—The attention of farmers is drawn to the article on page 34 dealing with the Fertilisers and Feeding Stuffs Act. This Act is designed for the benefit and protection of farmers, but unless advantage is taken of it, the benefits which its provisions provide will not be obtained, and the object of the Act will not be achieved.

Garden and Orchard.

The planting of fruit trees and bushes should be completed as soon as possible. In no circumstances, however, should planting take place while the ground is either sodden with rain or frozen. In all cases firm planting is essential to success.

During mild weather pruning should be proceeded with as rapidly as possible. In dealing with old trees care should be taken not to remove too much wood in any one year, as it may take several years before the balance between branch and root, which is essential for the annual bearing of fruit crops, is restored in trees which are too

severely pruned. Large cuts which are made with a saw should be coated when dry with a paint made up as follows :—

To 2 lb. of white lead paste as bought from a paint shop add two teaspoonsful of paste driers and two tablespoonsful of raw linseed oil. Mix thoroughly and then add two tablespoonsful of turpentine, and mix.

This dressing will prevent decay starting in trees, and also help to prevent the entry of certain diseases such as Silver Leaf in plums and apple trees.

In the neighbourhood of towns where birds are likely to injure the buds of gooseberries and plums, the pruning of these should be left until growth starts in the spring.

Spraying Fruit Trees and Bushes.—The spraying of apple trees with tar distillate washes should be completed as soon as possible. A day when the trees are dry and when there is no immediate prospect of rain should be selected for this work. Spraying with tar distillate washes should not take place during frosty weather, as the emulsion is liable to separate from the tar distillate when the atmospheric temperature is low.

Apples in Storage.—The stocks of apples in stores should be gone over carefully, and, if the apples are ripening rapidly, arrangements should be made to market them at an early date. A good price is obtainable this year for apples, and every care should be taken to get the maximum quantity on to the market in good condition.

Vegetables.—Where a greenhouse is not available for growing seedling plants, these can be raised by preparing a hotbed from stable manure, over which can be placed a frame, and the seeds sown in soil in shallow boxes. A start may now be made with the sowing of seeds and vegetables such as cauliflower, Brussels sprouts, onions and lettuce under glass. As soon as the seedlings germinate, they should be kept close up to the glass so as to produce sturdy plants, and gradually hardened off for pricking out later in the season. During fine weather in February a small sowing of broad beans may be made out-of-doors in a sheltered situation.

Glasshouses used for the growing of tomatoes and other crops during the summer should, during the present month, be washed down and fumigated, if this has not already been done, in preparation for the coming season's crops.

There is every prospect that there will be a shortage of green vegetables in British markets during the coming two or three months ; therefore, owners who have a quantity of vegetables suitable for sale should take every reasonable precaution regarding their cultivation and marketing. Cabbage which was planted out last September should get a dressing of nitrate of soda early in February at the rate of 3 cwt. per acre to encourage early growth so that the plants will mature early in the season.

Poultry.

Hatching should now be proceeded with to full capacity so as to obtain an adequate number of early-hatched pullets for egg production next autumn. The number of pullets required should be kept in mind when arranging the hatching programme and sufficient eggs incubated for requirements. Under ordinary conditions, at least 4 eggs are required for each pullet produced to maturity, but it is always wiser to allow even a larger number of eggs for each pullet to be produced so that rigid culling may be carried out and only the best birds retained for egg production.

The selection and care of eggs intended for hatching are not always given the attention they deserve. As was pointed out in last month's report, good hatching eggs are obtained only when the breeding stock are properly selected, fed and managed, but even under ideal conditions of management, some of the eggs produced will not be suitable for hatching. Eggs less than 2 oz. in weight should not be used for hatching, nor should those which are badly shaped or which have shells of rough texture. Very large eggs should not be selected, as they rarely hatch well. It is a good plan to submit eggs for hatching to the light test, as this will reveal slight cracks which may escape casual observation ; it will also indicate if the eggs are fresh.

Good hatching eggs should not be spoiled through bad storage. While it can be definitely stated that best results are obtained from the freshest eggs, some days must necessarily elapse on most farms from the time some of the eggs are laid until they are set. Eggs for hatching should not be more than seven days old, and during the time they are being stored they should be kept in a room where the temperature does not rise above 70 degrees or fall below 40 degrees Fahrenheit. A temperature of 50 degrees in the storage room is ideal.

Conditions which permit of excessive evaporation from the eggs should be avoided, as this is detrimental to hatching results. Evaporation can be largely prevented if the eggs are placed in fresh bran or chaff. A suitable and convenient receptacle for storing hatching eggs is an ordinary egg case having flats and fillers. With this receptacle, provided the top is securely fastened, the eggs can be turned daily during storage by simply turning the case over on to a different side each day.

Every precaution should be taken to guard the eggs against chilling both before and after hatching. It should be noted that eggs can be chilled before being placed in the incubator, and hatchability destroyed. During frosty weather, therefore, eggs should be collected at least twice daily from the nests and stored carefully. During incubation, testing of the eggs should not be done after the 14th day, while the incubator should not be opened after the 19th day.

When the hatch is complete, and before the chickens are removed from the incubator, the temperature of the incubator should be lowered gradually until it reaches the same level as that of the hover to which the chickens are to be transferred. The temperature under the canopy of the hover should be about 90 degrees Fahrenheit when the chickens are first placed in it. The chickens should be transferred from the incubator to the rearing quarters about mid-day and the greatest care taken to prevent the birds getting chilled while doing so. A basket lined with a piece of warmed blanket is a suitable receptacle for this purpose, and the transfer should be made with as little delay as possible.

A temperature of from 85 to 90 degrees Fahrenheit should be maintained in the hover during the first week, and care taken to prevent the chicks during this period from wandering too far from the source of heat. A temporary frame of light boards placed around the hover will prevent this occurring and also assist in preventing floor draughts in the house from reaching the chickens.

Full particulars regarding the rearing, feeding and management of artificially hatched chickens are given in Leaflet No. 20. This leaflet also gives useful information on the management of incubators.

Poultry keepers are reminded that should an abnormal number of deaths occur amongst chickens, post-mortem examinations and reports, free of charge, can be obtained on specimens sent to the Ministry's Veterinary Research Division, The Farm, Stormont. The services of the Instructor in Poultry-keeping are also available should information relating to poultry-keeping matters be desired.

DISINFECTION OF HATCHING AND REARING APPLIANCES.

In recent years the prevention and control of disease have become closely associated with the adoption of hygienic measures, aimed at destroying the active and dormant disease organisms which may be present. In chicken rearing the importance of hygiene cannot be overestimated. Many of the diseases and ailments to which chickens are prone to fall victims during the rearing stages do not lend themselves readily to treatment, and it is only by the adoption of suitable preventive methods involving strict cleanliness and disinfection that the ravages of such outbreaks can be avoided. The following notes on the cleaning and disinfection of appliances may be helpful at this season.

Purchased second-hand appliances are responsible for introducing disease to many poultry farms. It is advisable, therefore, to refrain from purchasing second-hand incubators, brooders, etc., or to ensure before purchase that such appliances are from farms where outbreaks of infectious diseases have not occurred. In the long run it will be found usually that second-hand hatching and rearing appliances are dear, even though purchased at cheap prices as compared with those quoted for new appliances. Apart from the risk

of introducing disease, there is the possibility of a second-hand appliance, such as an incubator, being inefficient and unsatisfactory.

Incubators should receive particular attention as regards cleaning and disinfection, and it is a wise plan to clean and disinfect each machine both before and after each hatch. The felts should be removed and the trays well scrubbed with hot water and afterwards disinfected with a reliable disinfectant at the strength recommended by the maker. After disinfection and when the felts and trays have been replaced, the incubator should be fumigated with formaldehyde gas as an additional precaution against the risk of any crack or crevice having been overlooked. The formaldehyde fumigation may be carried out by putting some potassium permanganate crystals in a tin placed in the incubator and pouring a quantity of formalin over the crystals. The proportions for a 150 egg-size incubator are two teaspoonsful of potassium permanganate and two tablespoonsful of formalin. The door of the incubator should be closed immediately the formalin is poured over the crystals, and the machine should be kept closed for two or three hours afterwards. As fumigation is most effective when the temperature of the incubator is at least 60 degrees Fahrenheit, the lamp should be lighted for some time previous to fumigation.

Hovers and brooders should also be cleaned, disinfected, and fumigated in a similar manner to incubators. The proportions of formalin and potassium permanganate crystals given for a 150 egg-size incubator are also sufficient for a 150 chick-size brooder. In the case of a hover, the quantities will depend on the size of the house in which the hover is placed. For a house 6 feet by 6 feet, four tablespoonsful of permanganate crystals and two wineglasses of formalin will be necessary. Houses should be thoroughly cleaned and disinfected before fumigation is carried out. The droppings, litter, etc., should be removed and the floor scraped clean. If the nature of the flooring permits, the floor should be flooded with boiling water or flamed lightly with a blow lamp. The walls should be scrubbed with a hot soda solution made by dissolving 1 lb. of caustic soda in a gallon of boiling water. Drinking vessels and feeding troughs should also be cleaned and disinfected and left in the house when fumigation is being carried out. It is advisable to light the hover lamp for some time previous to fumigation so that the temperature of the hover and the house may be raised sufficiently to permit of effective fumigation taking place.

It must be emphasised that these sanitary precautions should be carried out after each hatch of chickens has been removed from the incubator or from the rearing house, and before another hatch is installed. The work of cleaning and disinfecting must be thoroughly done, and, in view of the importance of preventing disease outbreaks during the chicken rearing season, the time and labour spent in carrying out this work periodically will be well repaid by the results obtained.

WINTER RATIONS FOR LIVE STOCK.

At the prices of feeding stuffs given in the Table on page 44, the following are examples of economical and satisfactory meal mixtures for feeding to different classes of stock during the winter period :—

1. Dairy Cows.

3 part(s) by weight of crushed oats,
2 ,, ,, ,, ,, maize meal,
1 ,, ,, ,, ,, red bran,
2 ,, ,, ,, ,, decorticated earthnut cake.
(or 2½ ,, ,, ,, decorticated cotton cake.)

2. Fattening Cattle.

2 part(s) by weight of crushed oats,
2 ,, ,, ,, ,, maize meal ,
1 ,, ,, ,, ,, decorticated earthnut cake.

3. Young Growing Cattle.

2 part(s) by weight of crushed oats,
1 ,, ,, ,, ,, maize meal,
1 ,, ,, , , decorticated earthnut cake.

4. Fattening Pigs.

3 part(s) by weight of maize meal,
3 ,, ,, ,, ,, barley meal,
2 ,, ,, ,, ,, brown pollards ,
1 ,, ,, ,, ,, red bran,

with 2 or 3 pints separated milk or buttermilk per head daily. If milk is not available, 1 part of extracted soya bean meal should be added to the mixture given above and 3 lb. of a mineral mixture to each cwt. of meal mixture.

5. Sows with Litters.

3 part(s) by weight of maize meal,
1 ,, ,, ,, ,, flaked maize,
2½ ,, ,, ,, ,, red bran,
3 ,, ,, ,, ,, brown pollards,
1½ ,, ,, ,, ,, extracted soya bean meal.

3 lb. mineral mixture to each cwt. of meal mixture. If separated milk or buttermilk is available, the soya bean meal may be omitted.

6. In-pig Sows.

4 part(s) by weight of maize meal,
4 ,, ,, ,, ,, brown pollards,
2 ,, ,, ,, ,, red bran.

The addition of mineral mixtures to the above rations is essential except where milk is being fed in pig mixtures. A suitable mineral mixture for dairy cows is equal parts by weight ground limestone or chalk, steamed bone flour and common salt, fed at the rate of 3 lb. per cwt. of meal mixture. For other cattle and for pigs, the mineral mixture recommended is 3 parts by weight ground limestone or chalk and 1 part by weight common salt, fed at the rate of 2 lb. per cwt. of meal mixture in the case of cattle and fattening pigs, and 3 lb. per cwt. of meals in the case of sows suckling pigs.

It is desirable to add a small allowance of linseed cake or of bran to the ration given above for fattening cattle during the last month or six weeks of the fattening period.

It will be noted that red bran and brown pollards are specified in the rations. Usually red wheat offals are offered at cheaper rates than the white grades, and, provided the fibre content of the former is not excessively high, there is not much difference in feeding value, and, accordingly, it is more economic to use the cheaper grades.

BARLEY VARIETY EXPERIMENTS.

Barley meal is an ideal food for pigs, and its inclusion in the rations fed to the finishing stage encourages the production of bacon of good quality having white, firm fat. In the production of bacon pigs of the quality specified by modern requirements, barley meal has probably no equal amongst the range of foods available and suitable for pig-feeding.

The cultivation of barley has not in the past been practised extensively in Northern Ireland, except in particular districts where there was a demand for barley for malting. With the recent expansion in the pig industry, the growing of barley has assumed a role of major importance, since the use of barley meal in pig rations has become more general than formerly and the greater part of the barley meal so used is made from imported barley and usually more expensive than would be the case if the barley were grown on the home farm. It is obvious, therefore, that if satisfactory crops of barley could be grown generally in Northern Ireland, and the produce fed to pigs, the cost of producing bacon pigs would be reduced and at the same time the difficulties of obtaining carcases of the quality desired would be lessened.

With these considerations in mind, the Ministry is encouraging an extension in the area under barley, and through the medium of the Agricultural Instructors employed by County Committees of Agriculture, experiments and demonstrations designed to obtain information regarding varieties and other matters connected with barley growing were carried out in 1935.

In the case of the variety experiments, three different varieties were compared at each of 8 centres throughout Northern Ireland, and the results obtained are shown in the following table, the figures of yields being per statute acre.

County	No. of Centres	Spratt-Archer		Old Common (Chevallier)		Golden Archer	
		Grain	Straw	Grain	Straw	Grain	Straw
		cwt. qr.	cwt.	cwt. qr.	cwt.	cwt. qr.	cwt.
Antrim ..	1	19 1	37	22 2	35	26 1	47
Armagh ..	1	28 0	34	28 1	35	29 2	33
Down ..	2	24 0	27	23 0	24	24 2	29
Fermanagh ..	1	18 0	26	13 1	24	15 2	22
Londonderry	1	36 2	43	28 0	41	35 2	40
Tyrone ..	2	22 1	*43	19 3	*30	21 2	*40
Average Yields (8 centres for grain, 7 centres for straw)		24 1	34	22 1	30	24 3	34

*1 centre.

It will be seen that in all the counties good crops were obtained and that the average yield from all the centres was very satisfactory. Golden Archer gave slightly the highest average yield of grain. This variety is of comparatively recent introduction and closely resembles Spratt Archer, from which it was produced. Both Golden Archer and Spratt Archer have strong straw, which is fairly resistant to lodging, and are suitable for cultivation on the heavier types of soils in good condition. Old Common or Chevallier has also given a satisfactory average yield. This is an old-established variety having long, slender straw and is best suited for growing on the lighter classes of soils. It ripens slightly earlier than other varieties, and for that reason is most suitable for the later districts.

Under suitable conditions, good crops of barley can be grown in Northern Ireland, and farmers, particularly those engaged in pig-keeping, are recommended to sow even a small acreage of this crop in the incoming season and so reduce the expenditure on purchased feeding stuffs. Barley succeeds best after potatoes or turnips, and on such ground manuring is not necessary. Early sowing gives best results; the most satisfactory crops in these trials were those which were sown not later than the first week in April. A seeding at the rate of about 16 stones per statute acre is suitable.

Further information relating to barley growing can be obtained either from the Ministry or from the Instructor in Agriculture, who will visit and advise on request.

HOW FARMERS CAN TAKE ADVANTAGE OF THE FERTILISERS AND FEEDING STUFFS ACT.

The value of a feeding stuff or a manure depends chiefly on its chemical composition. Certain foods, such as maize meal and ground oats, are made by grinding commercially pure maize and oats, respectively, as grown, and their chemical composition is not liable to mechanical alteration. In the case of a food, such as decorticated cotton cake, which is manufactured, the chemical composition can be changed in the process of manufacture.

The Fertilisers and Feeding Stuffs Act, 1926, came into operation on the 1st July, 1928. The main object of this Act is to ensure that the purchaser of a fertiliser or a feeding stuff is fully aware of the nature of the commodity which he is purchasing. All manufactured manures and stock foods, therefore, the respective constituents of which may vary proportionally, have been brought within the scope of the Act and provision made that particulars as to their composition must be supplied to the purchaser.

Under the Act, the seller of such fertilisers and feeding stuffs must supply the purchaser with a statement, known as a statutory statement, containing particulars which will give the purchaser considerable information as to the quality of the article. The statutory statement may be given in any one of the following ways, provided it is given on or before delivery or as soon as practicable thereafter :—

(1) Included in the invoice.
(2) Printed on the bag.
(3) Printed on a label attached to the bag.
(4) Conveyed in some other form, in writing, to the purchaser.

Most farmers buy feeding stuffs and manures from a retailer. It is the legal liability of the retailer to supply the farmer with a statutory statement, and farmers should, in their own interests, see that they get the statutory statement. Many farmers are buying feeding stuffs and manures with their eyes closed. The quality of the article is not considered. So long as the price is low, the bargain is thought to be a good one. In many cases where the article is offered at a low price per ton, the quality is also low, and a similar article of good quality at a slightly higher price is better value for money. That is why farmers should, in their own interests, demand a statutory statement with all fertilisers and feeding stuffs purchased. If this is done, it will only be a short time before only articles of a high known quality will be on the market. Where possible, it is well to purchase only grades which are branded on the bag, or on a label attached to the bag, with the particulars required by the Act.

The following table gives particulars of the percentages of ingredients which should be present in samples of good quality of the commonly

used manures and feeding stuffs. In this table only particulars regarding the ingredients which must be specified in the statutory statement are given.

Feeding Stuffs.

Decorticated Cotton Cake	42% Protein.		8% Oil.	7% Fibre.
Decorticated Earthnut Cake	46% ,,		7% ,,	6.5% Fibre.
Linseed Cake and Cake Meal	29% ,,		9% ,,	
Palm Nut Cake (Extracted)	19% ,,		2% ,,	
Soya Bean Meal (Extracted)	45% ,,		1½% ,,	
Fish Meal	60% ,,		4% ,,	9% Phosphoric Acid, 3% Salt.
Meat and Bone Meal	60% ,,	Less than	8% ,,	8% Phosphoric Acid.
Bran	9% Fibre	} or less.		
Pollard	4% ,,			

Manures.

Superphosphate	16% Soluble Phosphoric Acid.
Basic Slag	18 to 19% Phosphoric Acid.
Ground Rock Phosphate	27½% ,, ,,
Semsol	20½% ,, ,,
Sulphate of Ammonia	20.6% Nitrogen
Nitrate of Soda	15.5% ,,
Nitro Chalk	15.5% ,,
Muriate of Potash	50% Potash.
Sulphate of Potash	48% ,,
Potash Salts	30% ,,
Kainit	14% ,,

Farmers who consider an article too highly priced or not up to the quality indicated in the statutory statement should consult the County Instructor in Agriculture, who is the official sampler for the district.

Particulars to be stated in the statutory statement of all feeding stuffs and manures are contained in Circular No. 10, copies of which can be had free of charge on application to the Secretary, Ministry of Agriculture, Stormont, Belfast.

ANNOUNCEMENTS AND REMINDERS.

Copies of the leaflets mentioned in Farm Notes are obtainable free, on request.

The inspections of bulls for licences begin on the 20th January. All bulls calved during the period 1st January, 1935, to 30th June, 1935, should be entered for these inspections. The inspections of boars farrowed during the months of July, August and September, 1935, are now in progress. Any outstanding applications for inspections should be furnished to the Ministry at once.

Hatching eggs from superior stock which have been blood-tested for bacillary white diarrhoea disease can be obtained from County Poultry Stations at moderate prices. Lists giving the names and addresses of these stations, and also of goose and turkey stations, can be obtained from the Secretary of the County Committee of Agriculture.

Lists giving the names and addresses of owners of Accredited Poultry Farms can be obtained free from the Ministry, on request. The birds on these farms have also passed the test for bacillary white diarrhoea

Farmers desiring fresh supplies of seed oats and potatoes are recommended to obtain these as soon as possible. Particulars regarding the most suitable varieties of oats to sow can be obtained from the Agricultural Instructor, while lists giving the names and addresses of growers of selected stocks of potatoes and of those having varieties certified pure by the Ministry can be obtained free, on request.

Free grants for the carrying out of drainage and other land improvement works can be obtained under the Ministry's loan drainage scheme. Particulars will be sent on request.

When purchasing manures and feeding stuffs, insist on obtaining a statement of analysis as required by the Fertilisers and Feeding Stuffs Act. See article on previous page of this report, and also obtain copies of Circular No. 10 and Leaflet No. 58, which give particulars of the analysis to be furnished on the purchase of manures and feeding stuffs.

HORSE BREEDING.

As the following figures indicate, an improvement during the past few years has taken place in the number of horses which are being bred in Northern Ireland :—

Year.	No. of Unbroken Horses and Ponies.	No. of Stallions.
1926 ..	.. 4,538	132
1930 ..	.. 6,900	177
1935 ..	.. 8,204	194

The demand for horses is increasing, and prices are reported to have a decided upward tendency. The small holding in Northern Ireland is well adapted to the use of the horse, and for short journeys in urban districts, where frequent stops are called for, the economy of horse transport is indisputable.

The Ministry's policy of eliminating sires of a low grade and replacing them, where practicable, by better-class animals, is bearing fruit, as the standard of the stallions which were shown at the last annual inspection for licences is reported to be definitely higher than it was ten years ago.

The breeding of better horses is also encouraged by the system of providing premiums for high-class stallions, whose services are made available for farmers' mares at comparatively low fees. An exhibition of these superior stallions is held annually in the month of February at the Balmoral Show Grounds, Belfast, under the auspices of the Royal Ulster Agricultural Society, and farmers have, therefore, an excellent opportunity of seeing gathered together, at one centre, the cream of the sires in the province, of both light and heavy types. The exhibition will take place this year at the same venue—Balmoral Show Grounds—on the 14th February, commencing at 10 a.m., and everyone who is interested in the breeding of horses is invited to attend. The price of admission is 1/-, which includes a catalogue of the animals on view. In the next Monthly Report it is hoped to publish an account of the function.

FORESTRY.

Scheme for Supplying Young Trees at Reduced Prices to Farmers.

The attention of farmers is directed to the Scheme under which young forest trees of various species grown in the Ministry's nurseries are supplied at the reduced price of 30/- per 1,000. There is at present a number of such trees available of each of the species mentioned below, and those who wish to purchase 1,000 or more should communicate at once with the Secretary, Ministry of Agriculture, Stormont, Belfast, from whom copies of the Scheme and application forms can be obtained. Each lot of 1,000 trees would include not more than two species, except that a few Pinus Murrayana, White Spruce, or Mountain Pine, of which there is only a limited quantity, and which are intended for shelter belts, could be included in a consignment, if desired, for mixing with one or two other species, such as Scots Pine or Spruce.

Sitka Spruce,
Japanese Larch,
Norway Spruce,
Scots Pine,
Douglas Fir,
Mountain Pine,
Pinus Murrayana,
White Spruce.

LECTURES AND CLASSES.

The following lectures and classes have been arranged by County Committees of Agriculture :—

LECTURES.

County.	Day and Date.	Centre.	Time.	Subject.
Armagh	Mon., 20th Jan.	Cormeen P.E. School, Killylea.	7.30 p.m.	Manures and Manuring.
,,	Wed., 29th ,,	Lisnadill P.E. School	,,	Live Stock.
,,	Wed., 5th Feb.	Mountnorris Manse Hall	,,	Results of Recent Experiments.
,,	Frid. 7th ,,	Clare R. P. Hall, Tanderagee.	,,	Do.
Fermanagh	Frid. 17th Jan.	Ashwoods P.E. School	7 p.m.	Pasture Management and Feeding of Livestock.
,,	,, 24th ,,	Ballyreagh P.E.S.	,,	
,,	,, 31st ,,	Aghavoorey P.E.S.	,,	Do.
,,	,, 7th Feb.	Banagh P.E.S.	7.30 p.m.	Do.
,,	,, 14th ,,	Carrickbeg P.E.S.	,,	Do.
Londonderry	Wed., 15th Jan.	Culcrow Old School. Aghadowey	,,	Winter Feeding of Cattle.
,,	Tues., 21st ,,	Knocknagin P.E.S., Desertmartin	7.0 p.m.	Profitable Poultry-keeping.
,,	,, 28th ,,	Culnady P.E.S., Upperlands	,,	Do.
,,	Wed., 29th ,,	Margymonaghan P.E. School, Bellarena	7.30 p.m.	Winter Feeding of Cattle.
,,	Thurs., 30th ,,	Droghead P.E.S., Aghadowey	7.0 p.m.	Profitable Poultry-keeping.
,,	Wed., 5th Feb.	The Old Hall, Tamlaght O'Crilly	7.30 p.m.	Winter Feeding of Cattle.
Tyrone	Wed., 15th Jan.	Dooish P.E.S. Drumquin	7.30 p.m.	Management of Grassland.
,,	Frid., 17th ,,	Tattysallagh P.E.S., Omagh	,,	Breeding, Feeding and Management of Livestock.
,,	Frid., 17th ,,	Killeenan P.E.S., Cookstown.	7.30 p.m.	Winter Feeding of Livestock.
,,	Frid., 24th ,,	Fardross P.E.S., Clogher	,,	Breeding, Feeding & Management of Livestock.

LECTURES (continued).

County.	Day and Date.	Centre.	Time.	Subject.
Tyrone	Frid., 24th ,,	Castlemellon P.E.S., Donemanagh	,,	Management of Grassland.
,,	Frid., 24th ,,	Benburb P.E.S.	,,	Breeding and Feeding of Pigs.
,,	Frid., 31st ,,	Knockmoyle P.E.S., Omagh	,,	Breeding, Feeding and Management of Livestock.
,,	Frid., 31st ,,	Killeeshil P.E.S., Donaghmore	,,	Breeding and Feeding of Pigs.
,,	Frid., 7th ,,	Drumrugh P.E.S., Omagh	,,	Breeding, Feeding and Management of Livestock.
,,	Frid., 7th ,,	Drummond P.E.S., Cookstown	,,	Breeding and Feeding of Pigs.
,,	Frid., 14th ,,	Donaghey P.E.S., Cookstown	,,	Do.

CLASSES.

County.	Day and Date of Commencement of Class.	Centre.	Time at which class is held.	Subject.
Armagh	Mon., 20th January	Grangemore P.E.S.	6 to 8 p.m.	Poultry-keeping.
Tyrone	Mon., 13th ,,	Dunmullan P.E.S., Omagh	6.30 to 8.30 p.m.	Poultry-keeping.

The following agricultural talk will be given from the Belfast Station of the British Broadcasting Corporation :—

Day and Date.	Time.	Speaker.	Title.
Frid., 31st Jan.	8.10 to 8.25 p.m.	H. O'H. O'Neill, B.Agr., B.Sc., Ministry of Agriculture.	Hints to Milk Producers.

TRAINING OF GIRLS IN POULTRY-KEEPING, DAIRYING, &c.

The Ministry has two schools, the North West School and the Ulster Dairy School, which provide for the training of girls.

The North West School is situated at Strabane, County Tyrone, and has accommodation for 24 pupils. The courses of instruction are designed to afford a sound practical training in modern economical

methods of dairying, poultry-keeping and rural housewifery. Admission is by scholarship given by the County Committees of Agriculture, which includes free tuition, board and residence. Applications for such scholarships should be made to the Secretary of the Committee of Agriculture for the county in which the applicant resides.

The Ulster Dairy School is situated at Loughry, Cookstown, County Tyrone, and has accommodation for 50 pupils. It provides the most up-to-date training in all matters connected with women's sphere in farm life, including poultry-keeping, dairying and rural housewifery. Girls who show special ability are selected for a further period of training with a view to qualifying as Instructors under the Schemes of Agricultural Education. The fees, for the ordinary school course of three terms, are only £3 : 3 : 0 per term.

Prospectuses of both Schools, containing application forms, can be obtained free from the Ministry on request.

FOURTEENTH EGG LAYING TEST AT STORMONT.

The third period of four weeks ended on the 27th December, 1935, and particulars of the leading pens in each Section at the end of the period are given hereunder. There was a slight increase in egg production, due to some of the moulting pullets coming back into lay. The average egg production during the period, based on the number of birds originally under test, was 13.0 eggs per bird, as compared with 12.4 for the previous period.

There was a very appreciable increase in egg size, only 14 per cent. of the eggs laid during the period being below first grade.

SECTION 1.—WHITE WYANDOTTES (OPEN).

Position.	Name and Address of Owner.	Number of Eggs Laid.			Test Score Value.
		Super Grade.	1st Grade.	Below 1st Grade.	
1	Mrs. D. C. Gamble, Roan Lodge, Coalisland, Co. Tyrone. (Five pullets bred at Hillsborough Breeding Station.)	162	142	23	304
2	Mr. J. Hall, Lilac Cottage, Donacloney, Co. Down.	190	110	13	300
3	Mrs. H. G. Darley, Trory, Ballinamallard, Co. Fermanagh. (Four pullets bred at Hillsborough Breeding Station)	118	177	67	295

SECTION 2.—WHITE LEGHORNS (OPEN).

Position.	Name and Address of Owner.	Number of Eggs Laid.			Test Score Value.
		Super Grade.	1st Grade.	Below 1st Grade.	
1	Mrs. E. Johnston, Craigboy, Donaghadee, Co. Down. (Bred by Mr. J. A. Parkinson, Towneley, Burnley, Lancashire).	67	99	89	166
2	Mr. J. Waugh, Ballyrickard, Kilwaughter, Co. Antrim.	40	126	79	166
3	Mr. W. Gunning, Inglenook, Ballywalter, Co. Down.	67	89	91	156

SECTION 3.—RHODE ISLAND REDS (OPEN).

1	Mrs J. McNeill, Drain's Bay, Larne, Co. Antrim.	223	99	21	322
2	Mrs. E. R. Dunwoody, Benmore, Islandmagee, Co. Antrim.	212	105	18	317
3	Mr. N. Ormsby, Harryville, Lisburn, Co. Antrim.	105	166	96	271

SECTION 4.—ANY OTHER PURE BREED.

1	Mrs. H. W. Merrick, Agivey House, Aghadowey, Co. Londonderry.	117	92	23	209
2	Mrs. T. J. McLaren, Ballykeel, Sixmilecross, Co. Tyrone.	80	115	54	195
3	Miss C. C. Meara, Coalisland, Co. Tyrone. (All Light Sussex.)	44	128	32	172

SECTION 5 (a).—WHITE WYANDOTTES (STATION-HOLDERS).

1	Mrs. R. McCullough, Bruslee, Ballyclare, Co. Antrim.	191	151	30	342
2	Mrs. M. Rodgers, Ballyginney, Dundrum, Co. Down.	131	144	78	275
3	Mrs. J. Armstrong, Keeranbeg House, Donagh, Lisnaskea, Co. Fermanagh.	110	125	64	235

SECTION 5 (b).—WHITE LEGHORNS (STATION-HOLDERS).

Position.	Name and Address of Owner.	Number of Eggs Laid.			Test Score Value.
		Super Grade.	1st Grade.	Below 1st Grade.	
1	Mr. P. King, Leitrim, Banbridge, Co. Down.	137	79	12	216
2	Mrs. E. A. Paul, Divernagh, Bessbrook, Co. Armagh.	72	103	35	175
3	Mrs. J. Brown, Gorsebank, Culcrum, Co. Antrim. (Five pullets bred at Hillsborough Breeding Station.)	73	81	60	154

SECTION 5 (c).—RHODE ISLAND REDS (STATION-HOLDERS).

1	Mrs. M. D. Bell, Woodview, Moneymore, Co. Londonderry.	174	98	27	272
2	Mrs. T. J. McNeary, Gorran, Blackhill, Coleraine, Co. Londonderry.	94	164	31	258
3	Miss M. L. Fleming, Ballymenagh, Dungannon, Co. Tyrone. (Three pullets bred at Hillsborough Breeding Station.)	181	75	17	256

SECTION 6.—POULTRY CLUBS AND YOUNG FARMERS' CLUBS.

1*	Banbridge and District Poultry Club	123	145	40	268
2**	Ballyclare Poultry Club	53	171	61	224
3***	Dungiven Young Farmers' Club	99	107	16	206

*R.I.R. **W.L. ***R.I.R.

Mrs. McCullough's pen, which occupied first place in Section 5 (a), was the leading pen in the entire test at the end of the period, while Mrs. McNeill's pen, which was leading in Section 3, was second. Four birds died during the period, three in Section 1 and one in Section 3, making a total of 12 deaths from the commencement of the test. This represents a mortality rate of 1.3 per cent. The mortality rate during the first three periods of the previous test was 1.6 per cent.

ANSWERS TO CORRESPONDENTS.

The following questions of a topical nature are answered this month for the benefit of readers.

Treatment of Poultry Runs to Purify Them.

Question.—Please advise as to the treatment of poultry runs on which birds which contracted coccidiosis have been ranging, so as to remove the risk of the disease reappearing this season.

ANSWER.—The most reliable and satisfactory method of dealing with land on which birds affected with coccidiosis have been kept is to plough it up and take one or more crops off it before allowing poultry access to it again. It is realised, however, that this method may not be practicable in all cases.

Copper sulphate, lime and common salt all have considerable value as purifiers of land in which the germs of disease may be present. Common salt, applied at the rate of about 1 ton per acre, has been found useful against worms and coccidiosis infection, but this dressing is inclined to make heavy clay land even more retentive of moisture, and is most suitable for the lighter classes of soils. Freshly-burnt lime, at the rate of 2 tons per acre, is a very suitable dressing for all land used for poultry, and, even apart from the question of destroying disease infection, it is recommended. Copper sulphate may be applied either as a spray or as a dry dressing. If applied as a spray, the solution should be prepared by dissolving 12 lb. copper sulphate in 40 gallons water, and from 5 to 10 barrels (40 gallons each) applied to 1 acre. If the dry method of application is adopted, ¼ cwt. finely ground sulphate of copper should be mixed with 2 cwt. dry sand, and this quantity spread over 1 acre. Copper sulphate should be applied before liming is done; if it is applied to limed land, its purifying properties will be neutralised by the lime.

Poultry should be kept off land dressed with salt or copper sulphate until the dressing has been thoroughly washed into the soil, and care should be taken to see that all holes in which pools of water, salt solution or copper sulphate solution may lie are filled up beforehand. The treatments specified are best applied during autumn or winter, when the grass is short.

MANURING OF POULTRY RUNS.

QUESTION.—Is there any manurial treatment which will improve the quality of grass on poultry runs? I find that the grass tends to grow coarse and tufty during the summer.

ANSWER.—Grass on which poultry are constantly penned will, in time, become coarse as described. This is due to the fact that it is being manured by an unbalanced manure, namely, the poultry droppings. Poultry manure is rich in nitrogen, and nitrogen encourages rank, soft growth in grasses during the summer season. The grass is suffering from a lack of phosphates, and, possibly, of potash, particularly if the soil is of a heavy nature.

A dressing composed of a mixture of 3 parts high grade basic slag and 2 parts kainit is recommended. This mixture should be applied as soon as possible at the rate of 10 cwt. per statute acre, which is approximately 1 stone of the mixture on an area of 60 square yards. The poultry should be kept off the treated land until the manures have been washed into the soil by rain.

PRICES OF FEEDING STUFFS.

The following table shows the average retail prices per cwt. of Feeding Stuffs at 1st January, 1936, with comparative figures for the corresponding date in 1935.

	1936.					1935.				
	Price per cwt.	Protein equivalent	Price per unit of protein equivalent	Starch equivalent	Price per unit of starch equivalent	Price per cwt.	Protein equivalent	Price per unit of protein equivalent	Starch equivalent	Price per unit of starch equivalent
STARCHY FOODS:	s. d.		s. d.		s. d.	s. d.		s. d.		s. d.
Maize (whole)	5 0	6.8	14 8	81.5	1 3	6 3	6.8	18 5	81.5	1 6
Maize Meal	5 3	6.8	15 5	81.5	1 3	6 9	6.8	19 10	81.5	1 8
Bran, Red	7 1	10.0	14 2	45.3	3 2	7 5	10.0	14 10	45.3	3 3
Bran, White	8 5	10.0	16 10	45.3	3 9	8 5	10.0	16 10	45.3	3 9
Pollard, Brown	7 2	11.0	13 0	71.2	2 0	7 5	11.0	13 6	71.2	2 1
Pollard, White	8 3	11.0	15 0	71.2	2 4	8 3	11.0	15 0	71.2	2 4
Barley Meal	6 9	6.2	21 9	69.7	1 11	8 7	6.2	27 8	69.7	2 6
Oats	4 10	7.6	12 9	60.0	1 7	5 6	7.6	14 6	60.0	1 10
Wheat (whole)	7 2	9.6	14 11	72.0	2 0	—	—	—	—	—
PROTEIN FOODS:										
Linseed Cake, home-made	9 9	25.0	7 10	71.8	2 9	10 7	25.0	8 6	71.8	2 11
Linseed Cake, foreign	9 4	25.0	7 6	71.8	2 7	9 9	25.0	7 10	71.8	2 9
Linseed Cake Meal	9 4	25.0	7 6	72.8	2 7	10 3	25.0	8 2	72.8	2 10
Cotton Cake, decorticated	8 10	35.0	5 1	71.2	2 6	9 0	35.0	5 2	71.2	2 6
Cotton Cake, undecorticated	6 3	17.0	7 4	39.2	3 2	6 11	17.0	8 2	39.2	3 6
Earth Nut Cake, decorticated	8 7	41.0	4 2	73.0	2 4	8 5	41.0	4 1	73.0	2 4
Soya Bean Meal (extracted)	8 9	38.0	4 7	64.0	2 9	9 0	38.0	4 9	64.0	2 10
Fish Meal (60% protein)	15 2	53.0	5 9	58.9	5 2	17 2	53.0	6 6	58.9	5 10
Meat and Bone Meal (40% protein)	9 5	36.2	5 2	44.0	4 3	9 9	36.2	5 5	44.0	3 7
Meat and Bone Meal (60% protein)	14 6	54.9	5 3	61.3	4 9	15 0	54.9	5 6	61.3	4 11
OTHER FEEDING STUFFS:										
Linseed, whole	15 4	19.0	16 0	119.2	2 7	16 0	19.0	16 10	119.2	2 8
Palm Nut Cake	7 10	17.0	8 10	70.2	2 3	7 9	17.0	9 1	70.2	2 2
Palm Nut Meal	7 11	17.0	9 4	78.0	2 0	8 0	17.0	9 5	78.0	2 1
Potatoes	4 2	0.6	138 11	18.0	4 8	2 5	0.6	80 7	18.0	2 8
Oat Straw	1 11	0.9	42 7	20.0	1 11	1 9	0.9	38 1	20.0	1 9
Meadow Hay	2 4	4.6	10 2	37.0	1 3	2 5	4.6	10 5	37.0	1 4

One of the objects of the foregoing table is to guide farmers in the economic purchase of feeding stuffs.

Ignoring their mineral content, the valuable constituents of any feeding stuff, whether home-grown or purchased, consist of :—

(1) Carbohydrates—a group of substances which include materials such as starch, sugar, etc. They supply heat or energy to the animal, and the surplus is stored by the animal as fat.

(2) Oil—which also provides heat or energy, the surplus being stored as fat. For this purpose oil is approximately $2\frac{1}{2}$ times as valuable as the carbohydrates, but its presence in the ration in excessive quantities may lower the digestibility of the ration and cause digestive troubles.

(3) Protein—The group of bodies termed protein or albuminoids contain nitrogen. Protein is the only ingredient of a feeding stuff which can produce flesh or muscle, and hence its special importance.

All animals require a certain amount of each of the above constituents, but the relative amounts depend upon the class of stock. Thus, for example, a two-year-old fattening bullock requires a relatively small amount of protein (flesh forming material). Its ration should consist mainly of foods rich in carbohydrates, i.e., fat producing substances. On the other hand, a dairy cow is producing milk, which is a substance rich in protein, and as the protein, that is flesh forming material in milk, can only be derived from the protein in the food, the ration for the dairy cow must contain considerably more protein than that for the fattening bullock.

There are very wide differences in the composition of feeding stuffs, both home grown and purchased. Some, such as oats and maize, are rich in carbohydrates, and, therefore, particularly valuable for fattening purposes, whilst others, such as decorticated cotton cake, earthnut cake and linseed cake, are rich in protein, and are chiefly valuable for their flesh and milk-producing properties.

In the following table the composition of some of the more commonly used feeding stuffs is shown :—

PERCENTAGE COMPOSITION.

	Water.	Protein.	Oil.	Carbohydrates.
Turnips (Swede)	88	1	0.2	9
Potatoes	75	2	0.1	21
Oat Straw	14	4	2	37
Meadow Hay	10	10	3	45
Pasture Grass	80	3.5	0.8	10
Cabbage	89	1.5	0.5	8
Fattening Foods :				
Oats	13	9	6	60
Maize Meal	12	10	4	70
Barley Meal	13	12	2	66
Flesh Forming Foods :				
Linseed Cake	11	30	10	35
Decorticated Cotton Cake	9	40	9	26

The farmer frequently asks what is the cheapest feeding stuff to buy. It is, however, often very difficult to give a direct answer. Much depends upon what the feeding stuff is required for, whether for fattening or milk production. Again, maize and oats are essentially fattening foods, whilst decorticated cotton cake is a flesh-forming food, and it would be just as futile to use the cost per ton to compare their values as it would be to use the cost per ton to compare the values of, say, sulphate of ammonia and superphosphate.

Foods of similar composition can, however, be compared, and it is possible for the enterprising farmer to effect considerable economies, not only in the use of home-grown feeding stuffs, but particularly in the purchase of concentrated feeding stuffs, by studying the market prices.

The starch equivalent figure is a measure of the energy, heat or fat producing value of the feeding stuff, and shows the number of pounds of starch which would be required to give the same heat or energy as 100 lb. of the feeding stuff. For example, the table on page 44 states that the starch equivalent of maize meal is 81½, or, in other words, 100 lb. of maize meal will provide as much heat or energy as 81½ lb. of pure starch.

The protein equivalent figure shows the number of pounds of digestible flesh or muscle producing material in 100 lb. of each of the feeding stuffs listed.

PRICES OF FERTILISERS.

The following table shows the ranges of retail cash prices of fertilisers per ton at 1st January, 1936.

		Cost of unit of fertilising ingredient at average of range of prices shown.		
		Nitrogen	Phos. Acid	Potash
Nitrogenous Manures.				
Nitrate of Soda (15%N)	£7 10 0 to £10 0 0	11/8		
Sulphate of Ammonia (20.6%N)	7 0 0 to 8 0 0	7/3¼		
Nitro Chalk (15.5%N)	7 5 0 to 8 10 0	10/2		
Phosphatic Manures.				
Superphosphate (16%S.P.A.)	£3 10 0 to £4 0 0		4/8¼	
Semsol (5% S.P.A. 15½% P.A.)	3 0 0 to 3 10 0		3/2	
Basic Slag (18% P.A.)	3 10 0 to 4 0 0		4/2	
Gafsa Mineral Phosphate (26% P.A.)	2 15 0 to 3 5 0		2/3¾	
Potash Manures.				
Kainit (14% P.)	£3 10 0 to £4 5 0			5/6¼
Potash Salts (20% P.)	4 0 0 to 4 15 0			4/4½
Potash Salts (30% P.)	4 15 0 to 5 5 0			3/4
Muriate of Potash (50% P.)	7 5 0 to 10 0 0			3/5¼
Agricultural Salt	£1 0 0 to £2 15 0			

Abbreviations: N.=Nitrogen. S.P.A.=Soluble Phosphoric Acid. P.A.=Phosphoric Acid. P.=Potash.

The cost of the unit of fertilising ingredient is determined by dividing the price per ton by the percentage of the ingredient contained in the manure, and this method of determining values is the only sound basis on which two grades of a manure which supplies the same fertilising ingredient can be compared. The price per ton is not a reliable guide as to which is the better value for money. For example, in the above table it is seen that the average of the range of prices for 14% Kainit is £3 17s. 6d. per ton, and for 30% Potash Salts £5 os. od. per ton, and it might be concluded that the Kainit was the better value for money. This is not so. The 30% Potash Salts contains more than twice as much Potash as the Kainit, and is, therefore, a cheaper source of potash when the price is even double that at which the Kainit is offered. The cost of a unit of Potash in the 30% Potash Salts is seen to be only 3/4, whereas the cost of a unit of Kainit is 5/6¼. At the prices ruling for these manures, 30% Potash Salts is, therefore, better value for money than Kainit. Similarly, it is seen that at the prices prevailing Gafsa Mineral Phosphate is a cheaper source of Phosphoric acid than Basic Slag, and that Sulphate of Ammonia is the cheapest source of Nitrogen.

Statement showing the Shipments of Live Stock from Northern Ireland Ports during the following periods, month of December, 1935, November, 1935, December 1934, twelve months ended 31st December, 1935, and 31st December, 1934.

PORTS OF:—	CATTLE.						SHEEP.				PIGS.			
	Fat	Stores	Milch Cows	Springers	Calves	Total	Fat	Stores	Lambs	Total	Fat	Stores	Total	Horses.
Belfast	7,074	5,215	1,138	46	-	13,473	6,558	–	–	6,558	4,682	3	4,685	180
Larne	10	337	–	–	–	347	534	–	–	534	1,617	–	1,617	17
Londonderry ..	340	2,935	41	31	1,069	4,416	1,262	–	–	1,262	415	–	415	1
Newry	65	61	–	–	45	171	–	–	–	–	–	–	–	–
Total, Dec., 1935 ..	7,489	8,548	1,179	77	1,114	18,407	8,354	–	–	8,354	6,714	3	6,717	198
Total, Nov., 1935	8,068	19,147	1,461	88	1,131	29,895	13,435	–	–	13,435	5,434	58	5,492	291
Total, Dec., 1934 ..	3,924	12,228	935	129	471	17,687	6,614	–	–	6,614	7,455	304	7,759	268
Total Twelve months ended 31st Dec., 1935	79,261	203,410	18,206	3,088	18,374	322,339	73,240	6	92,259	165,505	82,111	2,512	84,623	5,157
Total Twelve months ended 31st Dec., 1934	50,705	176,836	17,894	3,747	13,376	262,558	40,643	185	93,455	134,283	73,346	3,478	76,824	5,156

IMPORTS AND EXPORTS.

Table showing the Imports and Exports through Northern Ireland ports of certain Agricultural Products during the month ended 30th November, 1935, and the eleven months ended 30th November, 1935, with comparative figures for the corresponding periods in 1934.

(*These figures are supplied through the courtesy of the Ministry of Commerce and are subject to revision.*)

Commodity.	IMPORTS.				EXPORTS.			
	Month ended 30th November		Eleven months ended 30th Nov.		Month ended 30th November		Eleven months ended 30th Nov.	
	1935	1934	1935	1934	1935	1934	1935	1934
Bacon cwt.	2,605	3,237	29,347	37,142	41,925	20,598	230,542	173,786
Hams ,,	737	628	8,713	8,577	13,098	12,544	118,713	107,385
Pork ,,	—	—	8	594	3,736	5,284	35,831	33,706
Butter ,,	10,759	6,239	121,072	127,912	601	526	6,112	5,965
Eggs gt. hds.	5,774	7,085	69,094	63,562	181,777	148,911	3,191,815	3,110,573
Oat Products (including Oatmeal) cwt.	3,234	1,803	20,849	25,640	11,071	8,958	81,345	51,078
Potatoes Tons	—	—	155	276	20,289	10,328	130,057	113,453
Poultry cwt.	2	1	163	86	11,546	12,071	135,722	136,054
Grass seeds ,,	3,555	2,232	41,692	24,784	14,177	30,521	244,185	223,204

There were no imports of oats direct through Northern Ireland ports from abroad during the month of November, 1935. In the corresponding month of last year there were 120 cwts. of oats imported.

PRICES OF FAT STOCK.

The following are the average prices per live cwt. of bullocks and heifers, sold at Belfast Auction Marts during each of the five weeks ended 31st December, 1935:—

Week ended.	Bullocks.		Heifers.	
	s.	d.	s.	d.
3rd December	30	6	30	0
10th December	31	6	31	6
17th December	34	0	34	6
24th December	31	0	32	9
31st December	32	6	31	6

Average Prices of Live Stock at Fairs during the month of December, 1935.

Date.	Fair.	Calves (under 9 months.)	Store Cattle.	Fat Cattle (18 months and over).	Springers.		Milch Cows	Store Sheep.		Fat Lambs (under 12 months old).	Young Pigs.
					Cows.	Heifers.		Feeding Lambs (under 12 m'ths old)	Breeding Ewes.		
		Per head	Per Cwt. Live wgt.	Per cwt. Live wgt.	Per head	Per head	Per head	Per head	Per head	Per head	Per head
		£ s.			£ s.	£ s.	£ s.	£. s.	£ s.	£ s.	£ s.
3	Omagh ..	4 4/3	28/– to 31/–	29/–	15 10	14 0	13 10	– –	*1 15	*1 7/6	– –
4	Londonderry ..	– –	24/6 to 30/–	27/–	15 10	13 10	– –	– –	– –	– –	1 4
4	Rathfriland ..	5 0	25/– to 28/–	28/–	16 0	13 10	15 0	†0 15/–	– –	†1 2/6 *1 8	1 10
5	Ballymoney ..	5 0	27/9 to 30/–	28/–	15 0	13 10	– –	– –	– –	†0 18/6	1 8
5	Strabane ..	4 0	24/– to 26/6	28/–	16 0	– –	10 10	– –	– –	– –	– –
6	Moy ..	– –	26/6 to 33/–	28/6	13 0	13 0	12 0	*1 12/6	– –	– –	– –
9	Irvinestown ..	4 14	27/6 to 30/–	28/6	17 0	13 0	13 10	– –	– –	– –	1 12/6
10	Enniskillen ..	3 12/6	23/– to 28/–	27/–	16 0	12 10	15 0	– –	– –	– –	1 8
11	Crossgar ..	– –	28/– to 30/–	–	17 15	14 10	16 0	– –	– –	– –	1 14
11	Kilrea ..	4 3/3	25/– to 27/3	28/–	15 10	11 10	13 10	– –	– –	*1 15	1 8
13	Ballygawley ..	– –	27/6 to 33/6	28/6	15 10	13 0	14 15	– –	– –	– –	1 12/6
16	Camlough ..	4 0	22/6 to 28/–	29/–	14 0	13 10	13 10	– –	– –	*1 5	– –
18	Lisnaskea ..	4 4	25/– to 30/–	29/6	15 0	14 10	13 15	– –	– –	– –	1 9
19	Ballynahinch ..	– –	27/– to 30/–	–	17 5	– –	16 10	– –	– –	– –	1 14
21	Moneymore ..	3 1	22/– to 28/–	28/–	14 0	10 10	10 0	†1 0 *1 11/9	– –	– –	1 5/9
21	Portadown ..	4 5	27/– to 29/–	–	18 0	14 10	17 0	– –	– –	– –	1 10
23	Fintona ..	4 10	26/– to 30/–	28/–	13 0	12 10	14 10	– –	– –	†1 7/6	1 10
27	Castlederg ..	3 10	29/– to 31/6	29/–	13 0	– –	– –	– –	– –	– –	1 7/6
27	Killylea ..	– –	24/6 to 34/6	29/6	16 10	– –	15 7/6	– –	– –	– –	– –
28	Ballymena ..	5 2/9	20/6 to 32/–	–	16 15	17 10	14 10	– –	– –	– –	1 14
1st Jan.	Antrim ..	– –	24/– to 30/–	29/–	19 0	– –	17 10	– –	– –	– –	– –

* Downs and Cross.

† Mountain.

Table showing the numbers of Live Stock (1) exposed for sale and (2) sold at 21 fairs in Northern Ireland during the months of December, 1934, and November and December, 1935.

Description of Live Stock.	December, 1934.		November, 1935.		December, 1935.	
	Number exposed for sale.	Number sold.	Number exposed for sale.	Number sold.	Number exposed for sale.	Number sold.
Store Cattle ..	6,427	3,982	10,398	7,210	6,823	4,900
Fat Cattle ..	907	672	1,417	1,259	993	884
Dairy Cattle ..	1,114	878	1,683	1,342	1,270	1,030
Sheep	403	305	326	198	306	190
Lambs	343	278	457	418	209	204
Young Pigs ..	2,977	2,334	3,091	2,586	2,997	2,509

The offerings of live stock at fairs held during December were generally smaller than for the previous month. In a number of cases supplies at fairs were influenced by the weather, and the frost bound condition of the roads made the driving of cattle a risky business and also affected the attendance of buyers. There was a considerable decrease in the number of store cattle offered as compared with a month ago, but trade last month was brighter. Good, strong stores for fattening were in keen demand, whilst choice young cattle also attracted buyers. Prices for stores generally were firmer on the month. Fat cattle also were in smaller number, and trade in this end showed a gradual improvement, with a corresponding rise in prices. The Christmas sales accounted for heavy supplies at higher prices than have been ruling of late.

Smaller supplies of dairy cattle were selling fairly well up till Christmas, when trade slackened. Good quality springing cows and nice coloured heifers were selling readily throughout at recent satisfactory prices, but the offerings during December were mostly of poorer quality, and for these trade was slower and prices a little easier on the month. There was a good local trade done in fat sheep and lambs suitable for butchering, and the limited supplies were bought up at satisfactory rates.

Young pigs continued to be offered in large number, but trade was a little quieter and prices a shade cheaper on the month.

10th January, 1936.

G2522 Wt.1221/484 3,500 1/36 R.H.R. Gp.5

ULSTER DAIRY SCHOOL, COOKSTOWN

U. D. S.

USEFUL and practical courses of instruction in poultry-keeping, dairying and domestic science are provided for girls at this School.

DEFINITE advantages are derived from a course of training, whether the object is to return home or to take employment elsewhere.

SCHOOL fees are only £3 : 3 : 0 per term of 11 weeks, inclusive of board and residence.

Candidates for admission should obtain copies of the prospectus from the Ministry of Agriculture, Stormont, Belfast, and send in application forms without delay. Next term begins on 31st March, 1936.

GOVERNMENT OF NORTHERN IRELAND.
MINISTRY OF AGRICULTURE.

List of Ministry's Leaflets and other Publications.

No. 1. Flax Seed, 1935.
" 2. Improvement of Farm Poultry.
" 3. Feeding for Egg Production.
" 4. Marketing of Eggs.
" 5. The Dishorning of Calves.
" 6. The Packing of Apples in Standard Boxes.
" 7. Potato Variety Trials.
" 8. Seed Testing for Farmers.
" 9. The Renovation of Orchards.
" 10. Fruit Tree Pests—Capsid Bugs.
" 11. Fruit Tree Pests—Aphides and Apple Sucker.
" 12. Fruit Tree Pests—Caterpillars.
" 13. Contagious Abortion in Cattle.
" 14. Cheese-making on the Farm.
" 15. Suitable Varieties of Fruit.
" 16. The Feeding of Dairy Cows.
" 17. Home Bottling of Fruits and Vegetables
" 18. Marketing of Dead Poultry.
" 19. How to Feed Linseed.
" 20. The Hatching and Rearing of Chickens.
" 21. The Uses and Advantages of Portable Poultry Houses.
" 22. Leather-Jacket Grubs.
" 23. The Handling and Care of Wool.
" 24. Fluke in Sheep.
" 25. The Rearing and Management of Young Horses.
" 26. Ordnance Survey Maps for Farmers
" 27. How to Keep Eggs Clean.
" 28. The Construction of a Laying House for Poultry.
" 29. The Selection and Breeding of Laying Hens.
" 31. Coccidiosis in Poultry.
" 32. Roup of Poultry (Fowl Pox).
" 33. Spraying Calendar for Apple Orchards.
" 34. The Pruning of Apple Trees.
" 35. The Fattening of Pigs.
" 36. Advantages of Milk Recording.
" 37. The Raising and Fattening of Turkeys.
" 38. The Destruction of Charlock.
" 39. The Production of Clean Milk.
" 40. The Laying Down and Management of Temporary Pastures.
" 41. Blackleg, Blackquarter or Quarterill.
" 42. The Purchase of Balanced Rations for Dairy Cows.
No. 43. Tuberculosis in Poultry.
" 44. Results of Crop Experiments.
" 45. The Breeding and Rearing of Pigs.
" 46. Hints for Winter Egg Production.
" 47. The Care and Management of Sheep.
" 48. Baby Beef Production.
" 49. American Gooseberry Mildew.
" 50. Potato Blight
" 51. Butter-making on the Farm.
" 52. Gapes in Chickens.
" 54. The Breeding and Rearing of Calves.
" 55. Destruction of Ragwort or Benweed.
" 56. Identification of Egg Supplies.
" 57. How to have Eggs of First Quality.
" 58. How the Fertilisers and Feeding Stuffs Act benefits the farmer.
" 59. Bacillary White Diarrhoea.
" 60. Advantages of Winter Agricultural Classes.
" 61. The Care and Management of Breeding Bulls.
" 62. The Production of Timber on the Farm.
" 63. Sheep—Castration, Docking, Foot-Rot and Care of Feet.
" 64. The Destruction of Warble Fly Maggots in Cattle.
" 65. The Packing of Apples in Barrels.
" 66. Seed Testing Facilities for Traders.
" 67. The Cultivation of Vegetables.
" 68. The Cultivation of Strawberries
" 69. The Construction of Piggories.
" 70. Ringworm.
" 71. The Cultivation of Raspberries.
" 72. Tree Planting for Shelter and Ornament.
" 73. The Propagation and Maintenance of Healthy Stocks of Potatoes.
" 74. New Pure Strains of Flax.
" 75. Pig Production and the Pigs Marketing Scheme.
" 76. Acarine (Isle of Wight) Disease of Bees.
" 77. Licensing of Milk Producers and Distributors.
" 78. Graded Milk.
" 79. The Picking and Storing of Apples.
" 80. Hoose or Husk in Farm Stock.
" 81. The Construction of Cow Houses.
" 82. White Scour in Calves.

Any of the above leaflets may be obtained free of charge and post free on application to the Secretary, Ministry of Agriculture, Stormont, Belfast.

CIRCULARS.

No. 1. Phosphatic Fertilisers.
" 5. Why Pay a Tax on the Horns of Cattle ?
" 8. Basic Slag.
" 9. Smut in Oats.
" 10. Purchase of Fertilisers and Feeding Stuffs.
" 11. Fertilisers and Feeding Stuffs Act—General Summary.
" 12. The treatment of Liver Fluke.
" 306. Fertilisers and Feeding Stuffs Act, 1926—Revision of Regulations.

MISCELLANEOUS PUBLICATIONS.

Store Cattle.
Reports on Egg-Laying Tests.
Crop Insurance.
List of Growers of Certified Crops of Immune Varieties of Potatoes.
List of Growers of Certified Crops of Non-Immune Varieties of Potatoes.
The Ministry's Monthly Report.
Register of Premium Stallions.
Guide to the Live Stock Breeding Act (Northern Ireland), 1922.
Guide to the Marketing of Fruit Act (Northern Ireland) 1932.

Any of the above publications may be obtained free of charge and post free on application to the Secretary, Ministry of Agriculture, Stormont, Belfast.

The following publications can be obtained from His Majesty's Stationery Office, 80 Chichester Street, Belfast, at the prices stated :—

(1) The Annual Report of the Ministry of Agriculture for Northern Ireland. Price 2/6 net.
(2) Annual Report upon the Agricultural Statistics of Northern Ireland. Price 2/- net.
(3) The Journal of the Ministry of Agriculture for Northern Ireland. Price 2/6 net.
(4) The Agricultural Output of Northern Ireland. 1925. Price 2/6 net.